



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

NOV 07 2018

REPLY TO THE ATTENTION OF

WC-15J

**CERTIFIED MAIL 7016 3560 0000 4829 7767**  
**RETURN RECEIPT REQUESTED**

Ex. 6 (Personal Privacy)

Ex. 6 (Personal Privacy) Enterprises, LLC  
FOIA Ex. 6 (Personal Privacy)

Algoma, Wisconsin 54201

Subject: September 19-20, 2018 Compliance Evaluation Inspection Report

Dear Ex. 6 (Personal Privacy)

Enclosed, please find a copy of the U.S. Environmental Protection Agency Inspection Report for the Concentrated Animal Feeding Operation inspection conducted at Ex. 6 (Personal Privacy) Enterprises, LLC on September 19-20, 2018. The purpose of the inspection was to evaluate and document compliance of the Facility with the Clean Water Act.

If you have any questions or concerns regarding the inspection report please contact Donald R. Schwer III at (312) 353-8752 or schwer.don@epa.gov.

Sincerely,

Ryan J. Bahr, Chief, Section 2  
Water Enforcement and Compliance Assurance Branch

Enclosure

Cc: Andrea Gruen, WDNR

**CWA COMPLIANCE EVALUATION INSPECTION REPORT  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5**

**Purpose:** Compliance Evaluation Inspection

**Facility:** FOIA Ex 6 Enterprises, LLC

**NPDES Permit Number:** WI-0062235-03-01  
WI-S067831-5

**Date of Inspection:** September 19-20, 2018

**EPA Representatives:** Donald R. Schwer III, Agricultural Engineer  
Ben Atkinson, Agronomist

**State Representatives:** Andrea Gruen, Wastewater Specialist  
Ben Uvaas, Wastewater Specialist

**Facility Representatives:** Ex. 6 (Personal Privacy) Owner  
Ex. 6 (Personal Privacy) Operations Manager

**Report Prepared by:** Donald R. Schwer III, Agricultural Engineer  
schwer.don@epa.gov, 312-353-8752

**Inspector Signature:** DR III

**Approver Title:** Ryan Bahr, Section 2 Chief, Water Enforcement and Compliance Assurance Branch

**Approval Signature:** Ryan Bahr (acting for Ryan Bahr)

**Approval Date:** 11/7/18



## 1. BACKGROUND

The purpose of this report is to describe, evaluate and document **FOIA Ex. 6** Enterprises, LLC compliance with the Clean Water Act (CWA) at its Algoma, Wisconsin facility on September 19-20, 2018. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

**FOIA Ex. 6** Enterprises, LLC is a Limited Liability Company (LLC) dairy operation in Kewaunee County, Wisconsin. It is owned by **Ex. 6 (Personal Privacy)**. The operation consists of three locations with cattle and two remote waste storage locations. The production areas with cattle are the Main Facility at **FOIA Ex. 6 (Personal Privacy)** **FOIA Ex. 6 (Personal Privacy)** at **FOIA Ex. 6 (Personal Privacy)**. The satellite waste storage facilities are S Farm at E5641 County Highway S, and 54 Farm at E5041 State Road 54.

**FOIA Ex. 6** Enterprises, LLC is considered a large Concentrated Animal Feeding Operation (CAFO) due to the total number of cattle maintained at the facilities. **FOIA Ex. 6** Enterprises, LLC currently houses approximately 8,915 animals. Wisconsin Department of Natural Resources (WDNR) issued National Pollutant Discharge Elimination System (NPDES) permit WI-0062235-03-01 to the farm. The permit has an effective date of October 1, 2015 and an expiration date of December 31, 2018. The farm submitted a permit renewal application to WDNR on June 29, 2018. On September 14, 2018, WDNR granted approval for the facility to operate a temporary feed storage area on the west side of the Main Facility. This temporary feed storage area was not in operation during the inspection as silage harvest had just began.

At the west end of the Main Facility, earthwork was underway for a feed pad expansion and leachate management pond. **FOIA Ex. 6** Enterprises, LLC has coverage under WDNR National Pollutant Discharge Elimination System (NPDES) general permit WI-S067831-05 for construction storm water for this expansion. WI-S067831 provides permit coverage for a period of three years starting September 17, 2018.

## 2. SITE INSPECTION

EPA, along with WDNR, arrived at **FOIA Ex. 6** Enterprises, LLC Main Facility at approximately 1:25 p.m. on September 19, 2018. EPA parked the vehicle near the facility office. The temperature was approximately 60° F and it was overcast. The weather station, Kewaunee, WI US (USC00474195), recorded that there was no observed precipitation on September 19, 2018. The last significant rainfall event documented a USC00474195 was on September 4, 2018 with 2.65 in. of precipitation. I called **Ex. 6** **Ex. 6 (Personal Privacy)** at 1:28 p.m. and I explained to **Ex. 6 (Personal Privacy)** that I would like to conduct an inspection to evaluate **FOIA Ex. 6** Enterprises, LLC compliance with its NPDES permit.



## 2.1 Opening Conference

I began an opening conference in the farm conference room. The following attendees were present for the opening [Ex. 6 (Personal Privacy)] Andrea Gruen, WDNR; Ben Uvaas, WDNR; Ben Atkinson, EPA; and Donald R. Schwer III, EPA. Mr. Atkinson and I presented our credentials to [Ex. 6 (Personal Privacy)] during the opening of the conference at approximately 1:35 p.m. I explained to [Ex. 6 (Personal Privacy)] the statutory and regulatory purpose of the inspection and the areas EPA would like to cover during the inspection. I explained to [Ex. 6 (Personal Privacy)] his right to claim information EPA receives or documents at the farm as Confidential Business Information (CBI). [Ex. 6 (Personal Privacy)] did not make any claims of CBI during the opening conference.

I asked [Ex. 6 (Personal Privacy)] about the personal protective equipment (PPE) requirements at the farm and whether there are any health and safety concerns. [Ex. 6 (Personal Privacy)] stated there were no special PPE requirements. [Ex. 6 (Personal Privacy)] stated that silage harvest was active and there was a lot of heavy equipment traffic at the feed storage areas. EPA offered to wear high visibility vests in those areas. I told [Ex. 6 (Personal Privacy)] that we had contacted the state vet who advised us that no reports of infection animal disease outbreaks were in the area. I asked [Ex. 6 (Personal Privacy)] if EPA should be aware of any biosecurity concerns, if there were any specific locations to park the government vehicles, or whether we should perform the inspection in any specific order due to biosecurity concerns. [Ex. 6 (Personal Privacy)] did not have any specific biosecurity concerns as EPA would not be entering buildings.

I explained to [Ex. 6 (Personal Privacy)] that EPA would document the walkthrough by taking photographs and that samples would be taken if necessary. We asked [Ex. 6 (Personal Privacy)] if he would like us to split samples. [Ex. 6 (Personal Privacy)] declined to split samples at first but stated later in the opening for us to split the samples. I stated to [Ex. 6 (Personal Privacy)] that the facility can "fix" potential deficiencies or areas of concern during or shortly after the inspection. I stated that I could not provide assurance that if deficiencies were fixed that the Agency will not bring an enforcement action. I stated to [Ex. 6 (Personal Privacy)] that EPA would perform a Closing Conference after the walkthrough. [Ex. 6 (Personal Privacy)] asked about timing of the Closing Conference and I stated that I believed it would start at approximately 11 a.m. or 12 p.m. on September 20, 2018. The Opening Conference concluded at approximately 2:00 p.m. on September 19, 2018.

## 2.2 Facility Overview

Section 1.2 in the Permit Application Renewal, attached, describes background information on the farm, including the number and type of buildings and facilities on-site. Section 4 in the Permit Application Renewal provides information on the manure and wastewater transfer systems.

The animal numbers at the Main Facility include approximately 4,350 milking and dry cows and 1,414 calves and heifers. The animal numbers at the Longfellow Farm include approximately 2,356 calves and heifers, and the animal numbers at the K Farm include 795 beef cattle and calves. A complete breakdown of the animal numbers can be seen in



attached Permit Application Renewal, Table 2: Current Herd Summary. According to the permit application renewal, the farm intends to increase the number of milking cows and beef cattle at the facility. Ex. 6 (Personal Privacy) stated that current herd summary was accurate, that animals remain onsite for greater than 45 days, and that animal numbers have fluctuated by approximately five percent in the last two years. Ex. 6 (Personal Privacy) stated that all animals are contained in buildings or on concrete lots and that no acreage was devoted to pasture. Ex. 6 (Personal Privacy) estimated the production area to be approximately 65 acres.

During the next permit term, the farm intends to construct an additional feed storage area and leachate management pond at the Main Facility. The farm intends to abandon a concrete lot at the Longfellow Farm and construct additional bed pack barns at the K Farm.

At the Main Facility, the farm uses a solid separator to remove sand and manure solids from the waste generated at the freestall barns. Wastewater generated on-site is stored at the Waste Storage Ponds (WSP). At the Main Facility, wastewater in WSP #1 flows to WSP #2 which flows to WSP #3. Runoff from the Old Feed Storage Area flows to a collection basin on the south end of the area. Currently, the farm stated that the pump is set up in the collection basin to continuously pump during rain events. If the rainfall intensity exceeded the pumping capacity, runoff would flow to the Vegetated Treatment Area (VTA). The other Feed Storage Area drains by gravity to the WSPs.

At Longfellow Farm, wastewater generated onsite is primarily stored in WSP #1 and WSP #2 which are connected by a pipe. The Feed Storage Area and open lot drains to a Leachate Basin. The Leachate Basin is pumped to WSP #2.

At the K Farm, wastewater generated onsite is contained in the runoff collection pond. The 54 Farm and S Farm are satellite facilities for waste storage. The 54 Farm contains a slurry store tank. The S Farm contains WSP #1 and WSP #2 which are connected in series.

The facility uses different bedding at different locations at the facility. At the Main Facility recycled sand is used for the cows and straw and sawdust are used for the calves. At the Longfellow Farm, recycled fiber is used for the heifers and calves, along with oat hulls for the calves. At the K Farm, straw and sawdust are used for the bedding. Used bedding is either collected with the liquid in the WSPs, is stacked as a solid in areas that drain to WSPs, or is directly land applied. The facility uses well water for all its farms. A cattle mist cooling system is not used at the farm. The facility reuses milk parlor water for the solid separator at the Main Facility. The facility milks the cows three times per day.

The facility also operates a piping system to transfer wastewater between farms and fields. The piping system connects to 54 Farm, K Farm, Main Facility, and Longfellow Farm and provides outlets at various field points for irrigation or land application of the wastewater. On June 28, 2018, the facility had a manure release from a transfer pipe that entered a grassed waterway that is considered a conduit to surface waters. The grassed



waterway was dry during the release and manure was cleaned up from the grassed waterway before wastewater could flow through a tributary and enter Lake Michigan. WDNR issued a Notice of Noncompliance for the release. On October 29, 2018, WDNR closed the Notice of Noncompliance.

According the permit application renewal, the facility generates approximately 62,009,315 gallons of liquid manure and wastewater. Ex. 6 (Personal Privacy) stated that these figures were based off “book values” and that his cows likely generate less waste due to the way they are managed at the farm. According to the permit application renewal, the facility has a useable liquid storage capacity of 30,593,775 gallons. A breakdown of the waste storage facilities can be observed in Table 1.

Table 1: Waste Storage Capacity

Waste Storage Facility	Storage Capacity (gallons)	Type of Liner	Depth Markers
WSP #1 (Main Facility)	1,544,380	Concrete	No
WSP #2 (Main Facility)	5,692,377	Concrete	No
WSP #3 (Main Facility)	8,534,645	Concrete	Yes
WSP #1 (Longfellow)	5,844,619	Clay/Partial Concrete	Yes
WSP #2 (Longfellow)	5,172,742	Clay	No
Leachate Basin (Longfellow)	268,314	Concrete	Yes
WSP #1 (S Farm)	118,182	Clay/Concrete Bottom	No
WSP #2 (S Farm)	1,215,476	Clay	Yes
Runoff Collection Pond (K Farm)	1,085,871	Concrete	Yes
54 Slurry Store Tank (54 Farm)	1,117,169	NA	Not in Use

At the time of the inspection the 54 Slurry Store Tank was not operational and the farm was currently waiting for a completed engineering evaluation. Based on the production values of liquid manure and wastewater in the permit application renewal, the farm did not have 180 days of storage at the time of the inspection. The calculations for the maximum operational levels for the farms waste storage facilities at the Main Facility and Longfellow Farm did not include the volume of runoff associated with the 25-year, 24-hour rainfall event.

The farm distributed manure to S&S Jerseyland in August 2018. The farm estimate that 1.2 million gallons were distributed and stated that the records would be in S&S Jerseyland’s files. The farm could not provide a manifest or distribution record for the event.

I reviewed the farm’s monitoring and inspection program. The inspections had been documented as performed. The farm’s monitoring and inspection program did not have a narrative which would identify all the areas that need to be inspected at the facilities.



## 2.3 Walkthrough of the Facility

To facilitate the walkthrough section of this report, aerial photographs of the Longfellow Farm and Main Facility with waterways are in Attachment 1, and the inspection photographs are in Attachment 2. The attached Permit Application Renewal contains overview photographs and engineering diagrams which includes building labels. The Permit Application Renewal contains the following: a topographic map with all facility locations (Figure 12), the K Farm Site Plan (Figure 14), the Longfellow Farm Site Plan (Figure 15), and the Main Facility Site Plan (Figure 18).

### **54 Farm**

EPA arrived at [FOIA EX. 6] Enterprises, LLC 54 Farm at approximately 3:25 p.m. on September 19, 2018. EPA was joined by Andrea Gruen, WDNR; Ben Uvaas, WDNR, and [Ex. 6 (Personal Privacy)]. We walked to the 54 Slurry Store Tank and took pictures. The 54 Slurry Store Tank was under engineering review at the time and was not in use.

### **K Farm**

EPA arrived at [FOIA EX. 6] Enterprises, LLC K Farm at approximately 3:35 p.m. on September 19, 2018. EPA was joined by Andrea Gruen, WDNR; Ben Uvaas, WDNR, and [Ex. 6 (Personal Privacy)]. EPA parked at the farm lane between the calf barns and the open lot. [Ex. 6 (Personal Privacy)] left shortly after arrival. We walked the outside perimeter of the site starting at the north end of the calf barns. At the northwest end of the calf barns, some water was ponding and there was track out of feed solids in the surrounding area (Attachment 2: RIMG0399). We continued east then south along the outside of the calf barns. At the southernmost calf barn, feed solids were seen outside of the feed lane. The runoff from the area appeared to drain to the west (Attachment 2: RIMG0401). Sawdust and straw used for bedding were stacked at the south end of the site. At Field Point A in Figure 1, a drainage way was observed on the north side of the solids stacking area which appeared to drain from east to west (Attachment 2: RIMG0402; RIMG0403). Based on solids build up and the wet appearance of the ground surface, storm water appeared to drain into a grassed area that would flow south into an adjacent crop field. I did not observe any water in the grassed area or flowing to the adjacent crop field at the time of the inspection.

Solid manure and used bedding were stacked at the south end of the Runoff Collection Pond on concrete that drains into the Runoff Collection Pond (Attachment 2: RIMG0404). Depth markers were present at the north end of the Runoff Collection Pond (Attachment 2: RIMG0405). Runoff from the open lots entered the Runoff Collection Pond at the northeast end (Attachment 2: RIMG0406). I observed excessive vegetation around the perimeter of the Runoff Collection Pond (Attachment 2: RIMG0407). WDNR received a complaint in December 2017 regarding liquid manure observed at the northwest end of the northern most barn and continuing to the road ditch. I observed this area during the inspection and did not see any remnants of manure. I did not observe any seepages out of the northwest end of the barn. EPA walked east along the northern end



of this barn. At Field Point B in Figure 1, I observed that a portion of the open lot at the northeast end of the barn may have the ability to runoff into a grassed area; however, no flow was observed at the time of the inspection (Attachment 2: RIMG0408). The walkthrough concluded at this site at approximately 4:00 p.m.



Figure 1: Aerial photograph of FOIA Ex. 6 Enterprises, LLC K Farm with Field Points.

### S Farm

EPA arrived at FOIA Ex. 6 Enterprises, LLC S Farm at approximately 4:15 p.m. on September 19, 2018. EPA was joined by Andrea Gruen, WDNR; and Ben Uvaas, WDNR. EPA parked at the southeast end of the WSP's. The site was being utilized for satellite storage of waste. Waste had been transferred to the site in the prior week. I observed excessive vegetation around the WSP's berms and trees had established on the WSP's berm (Attachment 2: RIMG0409-RIMG0411). Depth markers were present at the west end of WSP #2 (Attachment 2: RIMG0412). We were joined briefly by Ex. 6 (Personal Privacy) at approximately 4:25 p.m. The walkthrough concluded at approximately 4:35 p.m.

### Longfellow Farm

EPA arrived at FOIA Ex. 6 Enterprises, FOIA Ex. 6 (Personal Privacy) at approximately 7:25 a.m. on September 20, 2018. EPA was joined by Andrea Gruen, WDNR. The temperature was approximately 60° F and there was a light rain. The weather station, Kewaunee, WI US (USC00474195), recorded 0.15 in. of observed precipitation on September 20, 2018. Facility representatives were not present during the inspection walkthrough. I observed



that the tributary to Lake Michigan that flows through the facility was dry at the opening of the inspection. We continued to the southwest end of this site. I observed track out of manure and feed at a barn entrance (Attachment 2: RIMG0415). At Field Point A in Figure 2, I observed brown water runoff from the area that flowed southwest into a grassed area (Attachment 2: RIMG0415-RIMG0416). The runoff continued into a grassed area and infiltrated into the soil. I observed that, based on the lay of the land, this area could drain south to a tributary to Lake Michigan. I observed a tile inlet at the tributary on the southwest end of the site. A tile map (Attachment 3) was in the facilities Nutrient Management Plan (NMP); however, based on the map the final disposition of the tile inlet is not apparent because the tile lines are not drawn. I observed that the tributary was dry during the inspection.

We continued walking east along the southern end of the barns and open lot. The open lot drains into an inlet (Attachment 2: RIMG0418) on the southern end which then flows east through a pipe and outlets (Attachment 2: RIMG0421-RIMG0422) into an area that drains east to the Leachate Basin. At Field Point B in Figure 2, I observed some track out of manure at the open lot into areas that are sloped to the south (Attachment 2: RIMG0419). We walked east along the Feed Storage Area. The drainage from the Feed Storage Area flows to the east to an L shaped concrete drainage ditch that then flows into the Leachate Basin (Attachment 2: RIMG0423-RIMG0424). We continued southeast of the facility to the tributary on the south end of the site. I did not observe water in this tributary (Attachment 2: RIMG0425-RIMG0426).

We walked across to the other tributary that drains through the site. I did not observe water in this tributary (Attachment 2: RIMG0427-RIMG0428). We walked to the concrete Leachate Basin (Attachment 2: RIMG0429). Depth markers were present at the west end of the Leachate Basin (Attachment 2: RIMG0430). We walked along the southern edge of berm of WSP #1 and WSP #2. I observed excessive vegetation on the berms of WSP #1 and WSP #2 (Attachment 2: RIMG0432-RIMG0434). We walked between the Special Needs Freestall Barn and Heifer and Dry Cow Freestall Barn. At Field Point C in Figure 2, I observed manure being tracked out of the barns and onto the concreted driveway (Attachment 2: RIMG0435-RIMG0436). The runoff from the concreted driveway could flow east toward the tributary that runs through the site (Attachment 2: RIMG0436). At Field Point D in Figure 2, it appeared that a portion of a concrete cattle walkway could drain east toward the concrete driveway (Attachment 2: RIMG0437).

I observed that the tributary was dry where it passed through the facility at a culvert (Attachment 2: RIMG0438). At Field Point E in Figure 2, at the corner of the Special Needs Freestall Barn and the Milking Parlor, there was a staging area where manure and wastewater was exposed to precipitation. This area could potentially flow southwest to the tributary (Attachment 2: RIMG0439). Mortalities are temporarily kept in an adjacent area to the east. I observed bones on the ground in this area and a 55-gallon drum with garbage and a green liquid (Attachment 2: RIMG0440-RIMG0441). I observed waste feed on the ground on the south side of the milking parlor (Attachment 2: RIMG0442).



This area could potentially flow south/southwest to the tributary. We walked around the perimeter of the freestall barns.

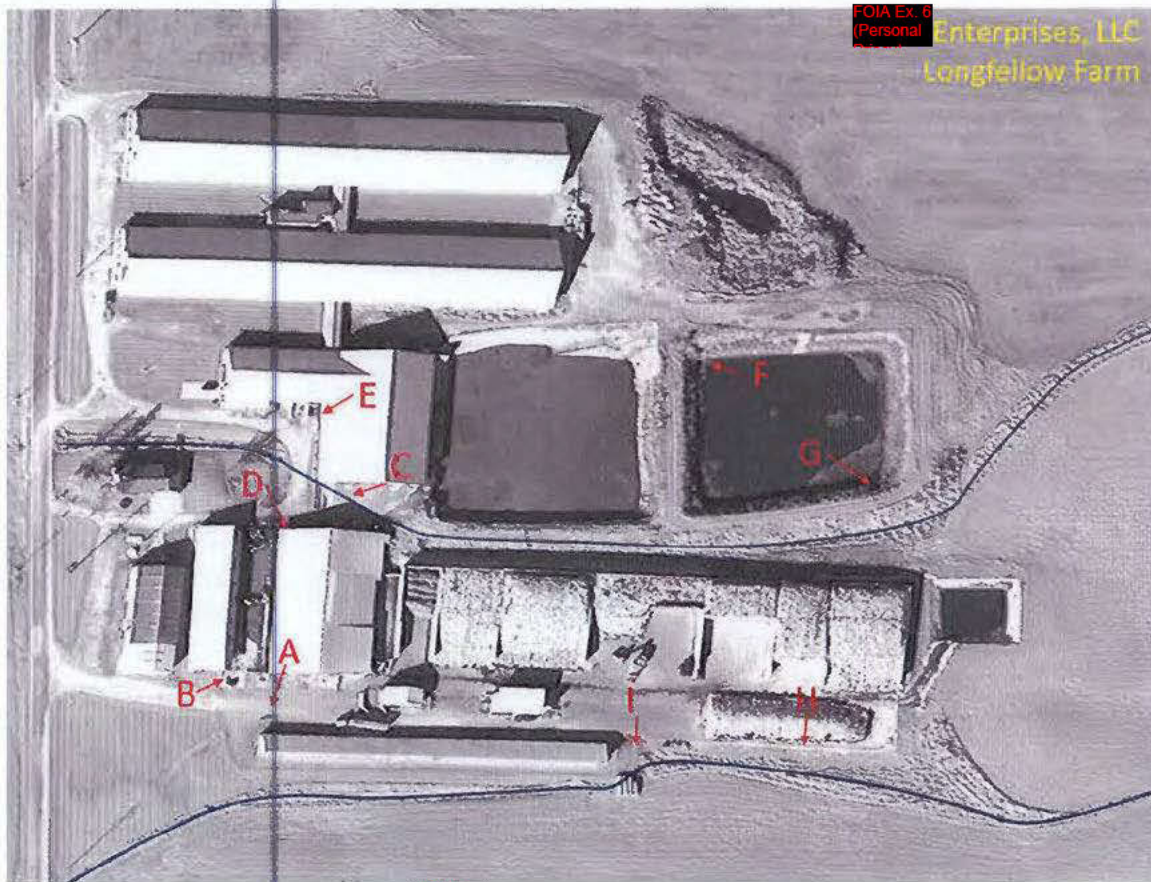


Figure 2: Aerial photograph of FOIA Ex. 6 Enterprises, LLC Longfellow Farm with Field Points.

At the northeast end of the site there was a wetland area in which wetland vegetation had been established (Attachment 2: RIMG0444-RIMG0446). Based on past aerial images this wetland area had been previously farmed dating back to at least 1992 and wetland area appears to have developed around the end of 2013. A storm water drainage pipe entered at the east end of the wetland (Attachment 2: RIMG0447-RIMG0448). We walked to WSP #1. A pipe connects WSP #1 and WSP #2 on the north end (Attachment 2: RIMG0449). The north side of WSP #1 had been concreted (Attachment 2: RIMG0450). I observed depth markers on the northeast end of WSP #1 (Attachment 2: RIMG0451).

At Field Point F in Figure 2, I observed tire marks extending down the sideslope of the berm at the northwest corner of the WSP #2 (Attachment 2: RIMG0452-RIMG0453). At Field Point G in Figure 2, I observed the concrete outfall was being undercut at the southeast corner of WSP 2 by erosion of the berm (Attachment 2: RIMG0454-RIMG0455). We walked back to the south end of the site. At Field Point H in Figure 2, I observed that a portion of the concrete feed storage area was sloped such that wastewater was flowing off the southern end into a grassed area (Attachment 2:



RIMG0457). I observed that the wastewater had killed vegetation at the point where it flowed off the concrete and dead vegetation was observed approximately 10 feet into the grassed area (Attachment 2: RIMG0458-RIMG0459). This area ultimately drains the the tributary that is adjacent to the south end end of the site. At Field Point I in Figure 2, I observed feed solids on the ground in the south end of the feed storage area that could drain southeast into a grassed area (Attachment 2: RIMG0460-RIMG0461). I observed feed solids along the southern end of the barn on the south end of the site in areas that could drain to the tributary (Attachment 2: RIMG0462).

## **Main Facility**

EPA arrived at FOIA EX 6 Enterprises, LLC Main Facility at approximately 9:20 a.m. on September 20, 2018. EPA was joined by Andrea Gruen, WDNR. Facility representatives were not present during the inspection walkthrough. The walkthrough began at the old feed storage area on the southeast end of the site. We walked to the Leachate Collection Tank and observed the inlet and outlet structures and pumping system. I observed flow entering the Leachate Collection Tank (Attachment 2: RIMG0463-RIMG0464). I observed that the freeboard was low enough so that no water entered the pipe that connects to the Vegetated Treatment Area (VTA). We walked to the VTA. At Field Point A in Figure 3, I observed ponded dark water at the entrance pipe to the VTA (Attachment 2: RIMG0465-RIMG0466). I did not observe any water flowing through the VTA. The VTA is designed so that water flows to the east. At the east end of the VTA water could flow into a ditch that drains south and then east under the road. I observed the culvert (Attachment 2: RIMG0468). Except at the entrance, no water was present in the VTA that could enter the ditch or culvert (Attachment 2: RIMG0467). The drainage area is situated such that water would outlet into a wetland area east of the county road (Attachment 2: RIMG0469).

We continued west along the south end of the Main Facility. At Field Point B in Figure 3, I observed some dead vegetation on the southeast end of the bunkers likely due to bunkers releasing leachate (Attachment 2: RIMG0470). We walked to the east end of the calf and heifer barns and then continued north. The farm lane between the calf and heifer barns drains from west to east into a stormwater inlet that outlets to the pond at the center of the facility (Attachment 2: RIMG0471). Stormwater piping was observed northwest of the feed storage area (Attachment 2: RIMG0472). I observed a small amount of sheen on the water surface that drained to the stormwater inlet (Attachment 2: RIMG0473).

We walked to the northeast corner of WSP #1. WSP #1 contained a concrete ramp. The storage stuctures are in series: WSP #1 flows into WSP #2, which in turn flows into WSP #3. The north feed storage area flows into WSP #3.

Earthmoving had started at the west end of the Main site (Attachment 2: RIMG0483). I observed a broken silt fence post (Attachment 2: RIMG0484). Field Point C in Figure 3 is the approximate location of the silt fence. In many locations the bottom of the silt fence had not been dug in properly (Attachment 2: RIMG0485-RIMG0486). I observed that silt fence posts had not been installed properly because silt fence post ends had not



overlapped (Attachment 2: RIMG0487). I observed that the silt fencing had not covered all areas in which earthmoving had occurred (Attachment 2: RIMG0488). The original trench dug for the silt fence had not been used in the northwest corner (Attachment 2: RIMG0489).

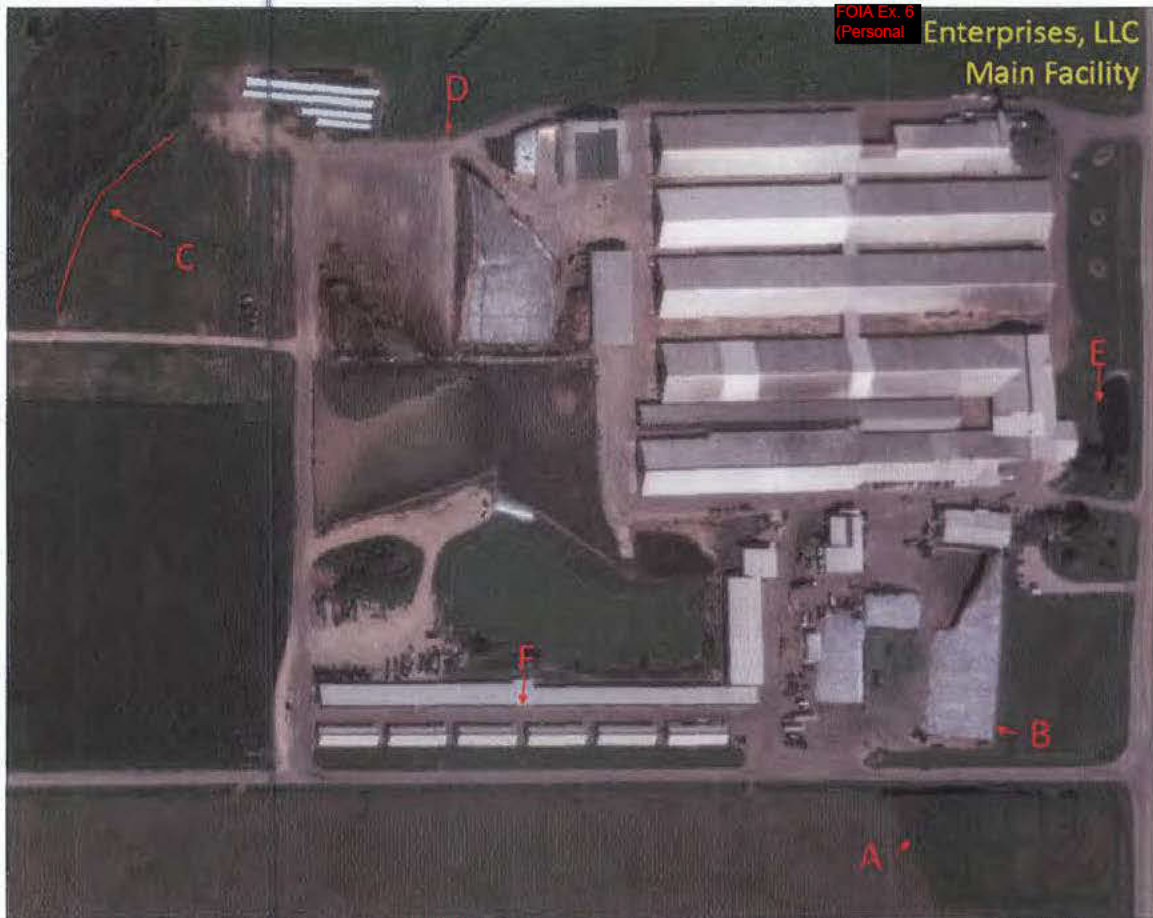


Figure 3: Aerial photograph of FOIA Ex. 6 Enterprises, LLC Main Facility with Field Points.

We walked east along the north end of the facility. At Field Point D in Figure 3, along the north end of the feed storage area, I observed feed solids blown into the field (Attachment 2: RIMG0490). I observed water with a brownish color in the field north of the feed storage area (Attachment 2: RIMG0491). Further east, I observed that the fans blowing out of Freestall Barn #5, northernmost barn, were depositing solids on the asphalt which drains to a storm water inlet (Attachment 2: RIMG0493). A stormwater inlet was located between barns (Attachment 2: RIMG0494). At Field Point E in Figure 3, I observed water that was light brown in color discharging from the storm water pipe into the pond on the east end of the facility (Attachment 2: RIMG0495). The final disposition of the stormwater pond was unknown (Attachment 2: RIMG0496). At the closing conference, Ex. 6 (Personal Privacy) stated that if the stormwater pond filled enough that it could flow south along the road ditch.

We walked back to the stormwater pond (wetland area) located at the center of the facility (Attachment 2: RIMG0497). I observed the depth markers in WSP #3 (Attachment 2: RIMG0498). The stormwater between the calf and heifer barns flowed



from west to east (Attachment 2: RIMG0499). At Field Point F in Figure 3, I observed track out of manure at the heifer barns which would flow with stormwater to the east (Attachment 2: RIMG0500). I observed that the stormwater flows east to a stormwater inlet and outlets into the center storm water pond (Attachment 2: RIMG0500-RIMG0501). I observed the stormwater outlets at the southwest corner of the stormwater pond (Attachment 2: RIMG0502). The final disposition of the pond is unknown. There were no managed outfalls. The inspection walkthrough concluded at 11:00 a.m.

## **2.4 Closing Conference and Post-Inspection**

I summarized my findings and observations to [Ex. 6 (Personal Privacy)] and [Ex. 6 (Personal Privacy)] starting at 11:51 a.m. I expressed the following summary:

- Manure was manifested or distributed to S&S Jerseys without proper documentation including the current nutrient analysis, recipient name and address, and approximate amount.
- Based on the 180-day storage calculation in the permit reissuance application, at the time of the inspection the farm did not have 180 days of storage due to the 54 Slurry Store Tank (54 Farm) not being operational.
- The monitoring and inspection program should include a narrative and identify all the areas required to be inspected. The monitoring and inspection program did include a signification amount of information, records had been kept, and it documented maintenance. I explained that without having [Ex. 6 (Personal Privacy)] familiarity with all the sites it would be difficult for someone else, if [Ex. 6 (Personal Privacy)] was unable to perform the inspection, to know exactly where and what needed to be inspected. I recommended adding the water and irrigation pipeline to the monitoring and inspection program.
- It was not apparent if the depth markers consider runoff from the 25-year, 24-hour rainfall event. I requested follow-up documentation on this later in the closing conference.
- Excessive vegetation was observed around the Runoff Collection Pond (K Farm).
- Excessive vegetation was observed around the WSP #1 (S Farm) and WSP #2 (S Farm) and trees where growing on the WSP berm.

### **Longfellow**

- At the Longfellow Farm, track out of manure was observed at the south end of the open lot and barn and was draining with storm water to the southwest into a grassed area.

- At the Longfellow Farm, silage leachate was flowing off feed storage area toward a tributary to the south. A section of dead vegetation was observed in the pathway generated by the silage leachate.
- At the Longfellow Farm, portions of a cattle walkway and track out of manure from in between barns appeared to have the potential to flow toward the center tributary.
- At the Longfellow Farm, storm water in contact with the mortality management and staging area could flow south toward the center tributary.
- WSP #1 (Longfellow) and WSP #2 (Longfellow)
  - Excessive vegetation was observed around the earthen berms.
  - Some of the side slopes appeared to greater than a 2:1 pitch.
  - The sidewall appeared to have erosion/damage due to equipment entering the WSP at the northwest corner of WSP #2.
  - At the concrete spillway in the southeast corner of WSP #2 there was erosion of the berm which was undercutting the concrete spillway.

#### **Main Facility**

- At the Main Facility, dark ponded water was observed in the VTA. A significant storm event could move this water through the VTA and may eventually reach a navigable water.
- At Main Facility, the silt fencing at the construction site had not been properly installed at all locations and did not cover the whole area where earthwork had occurred.
- At Main Facility, some feed had been blown into the field on the north side of the feed storage area.
- At Main Facility, the storm water outlet in to the storm water pond was light brown in color.

I stated that these are preliminary observations and areas of concern and that none of these observations should be considered findings of violation.

I requested the following information for follow up:

- Information on the pump model # and/or pump curve for the pump in the collection basin (VTA) for the feed storage area.
- The engineering evaluation for WSF #1 at the Longfellow site.
- The calculations regarding the 25-year, 24-hour rainfall event runoff from areas that contribute runoff to the WSFs at the Main Site, Longfellow, and K



Farm. The calculations for the determination of the maximum operating levels for WSFs at Main Site, Longfellow, and K Farm.

The closing conference ended at 1:00 p.m. EPA received the request information on October 12, 2018. It is included in Attachment 5.

### **3. AREAS OF CONCERN**

EPA documented the following areas of concern (AOCs):

#### **WPDES General Permit WI-S067831-5**

*According to Permit Condition 2.9.3 Installation of BMPs, 2.9.3.1 By the time land disturbing construction activities in any given portion of the site begins, install and make operational any erosion or sediment control practices that prevent or treat discharges for the initial site clearing, grading, excavating, and other land disturbing construction activities."*

*and*

*According to Permit Condition 2.9.4 Maintenance of BMPs, "The permittee shall ensure that all BMPs are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness."*

- The silt fence had not been placed such that it covered the whole area where soil had been disturbed.
- According to WDNR Conservation Practice Standard Silt Fence (1056), "Where joints are necessary, each end of the fabric shall be securely fastened to a post. The posts shall then be wrapped around each other to produce a stable, secure joint or shall be overlapped the distance between two posts. The silt fence joints were not properly installed at multiple locations at the site.
- According to WDNR Conservation Practice Standard Silt Fence (1056), "Anchoring – Silt fence shall be anchored by spreading at least 8 inches of the fabric in a 4 inch wide by 6 inch deep trench, or 6 inch deep V-trench on the upslope side of the fence. The trench shall be backfilled and compacted. Trenches shall not be excavated wider and deeper than necessary for proper installation." The silt fence had not been properly anchored at multiple locations at the site.

#### **WPDES Permit WI-0062235-03-01**

*According to Permit Condition 1.1 (Production Area Discharge Limitations), "The permittee may not discharge pollutants to navigable waters under any circumstance or storm event from areas of the production area, including manure stacks on cropland,*



*where manure and process wastewater is not properly stored or contained by a structure."*

The facility had the following locations in which manure and process wastewater was not properly stored or contained by a structure:

- At the Longfellow Farm, at Field Point A and B, track out of manure was observed as the south end of the open lot and barn and was draining with storm water to the southwest into a grassed area.
- At the Longfellow Farm, at Field Point C and D, portions of a cattle walkway and track out of manure from in between barns appeared to have the potential to flow toward the center tributary.
- At the Longfellow Farm, at Field Point E, storm water in contact with the mortality management and staging area could flow south toward the center tributary.
- At the Longfellow Farm, at Field Point H, silage leachate was flowing off feed storage area toward a tributary to the south. A section of dead vegetation was observed in the pathway generated by the silage leachate.
- At the Longfellow Farm, at Field Point I, feed solids were on the ground in the south end of the feed storage area in an area that could drain southeast into a grassed area.
- At the Main Facility, at Field Point A, dark ponded water was observed in the VTA. A significant storm event could move this water through the VTA and may eventually reach a navigable water.
- At the Main Facility, at Field Point F, track out of manure at the heifer barns could flow with stormwater to the east into a stormwater inlet.

*According to Permit Section 1.3.1 Proper Operation and Maintenance, "The permittee shall at all times properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. . .*

*All liquid manure and process wastewater storage or containment facilities shall have the permanent markers specified in s. NR 243.15(3)(e) (margin of safety and maximum operating level for liquid manure and process wastewater storage and the 180-day storage marker for liquid manure storage).*

- The maximum operating level depth markers for the WSPs that contain runoff do not appear to consider the runoff from the 25-year, 24-hour rainfall event, only the direct precipitation from the 25-year, 24-hour rainfall event falling on the WSPs.

*According to Permit Section 1.3.1 Proper Operation and Maintenance, "The permittee shall at all times properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. . .*



*The permittee shall maintain a design storage capacity of 180 days for liquid manure unless the Department approves a temporary reduction in design capacity to 150 days in accordance with s. NR 243.17(4).*

- At the time of the inspection, the permittee did not maintain a design storage capacity of 180 days for liquid manure. Based on the 180-day storage calculation, during the inspection the farm did not have 180 days of storage due to the 54 Slurry Store Tank (54 Farm) not being operational.

*According to Permit Condition 1.5 (Ancillary Service and Storage Areas), "The permittee may discharge contaminated storm water to waters of the state from ancillary service and storage areas provided the discharges of contaminated storm water comply with groundwater and surface water quality standards. The permittee shall take preventive maintenance actions and conduct periodic visual inspections to minimize the discharge of pollutants from these areas to surface waters."*

- At Main Facility, at Field Point D, some feed had been blown into the field on the north side of the feed storage area.
- At Main Facility, at Field Point E, the storm water outlet in to the storm water pond was light brown in color.

*According to Permit Section 1.7.1 Monitoring and Inspection Program, "As specified in the Schedules section of this permit, the permittee shall submit a monitoring and inspection program designed to determine compliance with permit requirements. The program shall be consistent with the requirements of this section and shall identify the areas that the permittee will inspect, the person responsible for conducting the inspections and how inspections will be recorded and submitted to the department."*

- The monitoring and inspection program should include a narrative and identify all the areas required to be inspected. The monitoring and inspection program did include a signification amount of information, records had been kept, and it documented maintenance. The wastewater pipeline should be added to the monitoring and inspection program.

*According to Permit Section 1.7.1 Monitoring and Inspection Program, "Weekly inspections of liquid storage and containment structures. For liquid storage and containment facilities, the berms shall be inspected for leakage, seepage, erosion, cracks and corrosion, rodent damage, excessive vegetation and other signs of structural weakness. In addition, the level of material in all liquid storage and containment facilities shall be measured and recorded in feet or inches above or below the margin of safety level."*

*and*



*"The permittee shall take corrective actions as soon as practicable to address any equipment, structure or system malfunction, noncompliance, failure or other problem identified through monitoring or inspections. "*

- Excessive vegetation was observed around the Runoff Collection Pond (K Farm).
- Excessive vegetation was observed around the WSP #1 (S Farm) and WSP #2 (S Farm) and that trees were growing on the WSPs berm.
- WSP #1 (Longfellow) and WSP #2 (Longfellow)
  - Excessive vegetation was observed around the earthen berms.
  - The sidewall had erosion/damage due to equipment entering the WSP at the northwest corner of WSP #2.
  - At the concrete spillway in the southeast corner of WSP #2 there was erosion of the berm which was undercutting the concrete spillway.

*Permit Section 3.2.2 Distribution of Manure and Process Wastewater, "To transfer responsibility for handling, storage and application of manure or process wastewater, a permittee shall submit a written request to the Department. . . . If approved, the permittee will be responsible for the following recordkeeping and reporting: . . ."*

- The manifest/distribution of manure to S&S Jerseyland was not properly approved or documented in accordance with the permit requirements.



## **LIST OF ATTACHMENTS**

1. Aerial Photographs
2. Inspection Photographs
3. Tile Map at Longfellow Farm
4. Permit Application Renewal
5. GHD, Site Visit Follow-Up October 12, 2018



ATTACHMENT 1: AERIAL PHOTOGRAPHS OF FOIA Ex. 6  
(Personal) ENTERPRISES, LLC



Figure 1.1: Longfellow Farm with Lidar and EPA's WATERS layers.

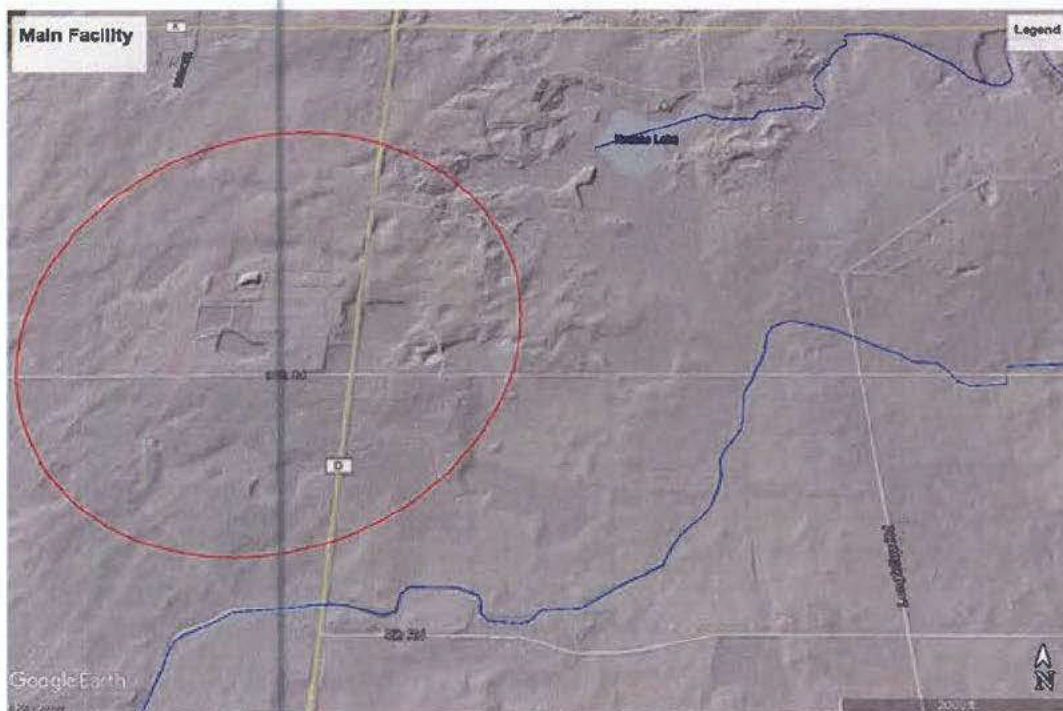


Figure 1.2: Main Facility with Lidar and EPA's WATERS layers. The red circle denotes a 0.5-mile radius around the Main Facility.



ATTACHMENT 2: INSPECTION PHOTOGRAPHS

**FOIA Ex. 5** Enterprises, LLC, EPA Inspection September 19, 2018 to September 20, 2018  
All photos taken by Donald R. Schwer III, Agricultural Engineer, U.S. EPA  
Camera: Ricoh WG-4



1: RIMG0396

Description: The slurry store was under evaluation with a portion of the sidewall removed. The center of the photo is a bottom center agitator at the center of the slurry store.

Location: 54 Farm

Camera Direction: Northeast



2: RIMG0397

Description: The slurry store was under evaluation with a portion of the sidewall removed.

Location: 54 Farm

Camera Direction: Northeast





3: RIMG0398

Description: The lane between barns was sloped from east to west.

Location: K Farm

Camera Direction: East



4: RIMG0399

Description: I observed ponded water along farm access road. Cattle feed can be seen on the ground throughout the photo.

Location: K Farm

Camera Direction: Northwest





5: RIMG0400

Description: Photo shows the east side of calf barns at the K Farm.

Location: K Farms

Camera Direction: Southwest



6: RIMG0401

Description: The south side of the barns drains to the west.

Location: K Farm

Camera Direction: West



7: RIMG0402

Description: Bedding was located at the south end of the K Farm. The bedding storage area drains to the west through a drainage way which is wet (darker color) in the photo.

Location: South end of K Farm

Camera Direction: East



8: RIMG0403

Description: Bedding was located at the south end of the K Farm. The bedding storage area drains to the west through a drainage way which is wet (darker color) in the photo.

Location: South end of K Farm

Camera Direction: West





9: RIMG0404

Description: Manure solids that are stacked on the south side of the Runoff Collection Pond drain into the pond.

Location: K Farm

Camera Direction: Northwest



10: RIMG0405

Description: Depth markers were located on the north end of Runoff Collection Pond.

Location: K Farm

Camera Direction: Northeast



11: RIMG0406

Description: An inlet into the Runoff Collection Pond was located on the northeast end.

Location: K Farm

Camera Direction: East



12: RIMG0407

Description: Excessive vegetation was located along the berms of the Runoff Collection Pond.

Location: K Farm

Camera Direction: Southwest





13: RIMG0408

Description: The north edge of the cattle lot contained some dug in areas where cattle foot traffic had occurred and runoff could potentially flow north.

Location: K Farm

Camera Direction: West



14: RIMG0409

Description: The WSPs at the S Farm were used for remote storage of manure. Cattle were not present at the site. Excessive vegetation was observed along the berms. Trees had become established between the two WSPs.

Location: S Farm

Camera Direction: Northwest

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15: RIMG0410

Description: The WSPs at the S Farm were used for remote storage of manure. Excessive vegetation was observed along the berms.

Location: S Farm

Camera Direction: Northwest



16: RIMG0411

Description: The WSPs at the S Farm were used for remote storage of manure.

Location: S Farm

Camera Direction: East





17: RIMG0412

Description: Depth markers were located on the west end of WSP.

Location: S Farm

Camera Direction: Down/East

Ex. 6 (Personal Privacy)

ARY ENTERPRISES, LLC  
WSP DEPTH WEEKLY INSPECTIONS 2018  
THREE-STAGE LIQUID MANURE STORAGE DEPTH - MAIN FACILITY

The owner of recorded liquid storage depth measurements to determine proper maintenance and recorded in feet on forms below the margin of safety (depth) level. This measurement must be taken for a depth gauge. If available, or estimated if a depth gauge is not available.

Level recorded for level in the main facility (Calculated Prescribed Level)

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06:43

Camera Direction: Down



20: RIMG0415

Description: Portions of the farm road on the southwest end of the facility drain to the southwest. Track out of manure and feed was observed near the barn accessway. The water was observed flowing southwest off the farm road and had a brown tint.

Location: Southwest end of Longfellow Farm

Camera Direction: East



21: RIMG0416

Description: The water was observed flowing southwest off the farm road and had a brown tint. The water dissipated as it entered the grassed area and flow was not observed continuing toward a tributary south of the facility.

Location: Southwest end of Longfellow Farm

Camera Direction: Southwest

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22: RIMG0417

Description: A tile riser was located at the southwest end of the site. If a significant enough of a rainfall occurred this area would drain the area documented in RIMG0415-RIMG0416.

Location: Southwest end of Longfellow Farm

Camera Direction: North



23: RIMG0418

Description: The open lot at the Longfellow site flows to a collection basin at the south end.

Location: Southwest end of Longfellow Farm

Camera Direction: North

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24: RIMG0419

Description: Track out of manure was observed at the south end of the open lot which could drain south.

Location: Southwest end of Longfellow Farm

Camera Direction: Northwest



25: RIMG0420

Description: A feed lane was located between the barn and open lot.

Location: Southwest end of Longfellow Farm

Camera Direction: North





26: RIMG0421

Description: The outlet from the open lot catch basin flows to the east.

Location: South end of Longfellow Farm

Camera Direction: Northwest



27: RIMG0422

Description: The outlet from the open lot catch basin flows to the east.

Location: South end of Longfellow Farm

Camera Direction: East



28: RIMG0423

Description: Surface runoff from the feed storage and open lot flows to the east toward a ditch and the Leachate Basin.

Location: Southeast end of Longfellow Farm

Camera Direction: West



29: RIMG0424

Description: The ditch flows to the Leachate Basin.

Location: Southeast end of Longfellow Farm

Camera Direction: North





30: RIMG0425

Description: The grassed tributary did not have water in it and was not flowing at the time of the inspection.

Location: Southeast of Longfellow Road

Camera Direction: West



31: RIMG0426

Description: The grassed tributary did not have water in it and was not flowing at the time of the inspection.

Location: Southeast of Longfellow Road

Camera Direction: East

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32: RIMG0427

Description: The tributary that flows through the facility did not have water in it and was not flowing at the time of the inspection.

Location: East end of Longfellow Farm

Camera Direction: Southwest



33: RIMG0428

Description: The tributary that flows through the facility did not have water in it and was not flowing at the time of the inspection.

Location: East end of Longfellow Farm

Camera Direction: East

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34: RIMG0429

Description: The Leachate Basin is pumped to the WSP #2.

Location: Southeast end of Longfellow Farm

Camera Direction: East



35: RIMG0430

Description: Depth markers were located on the west end of the Leachate Basin.

Location: Southeast end of Longfellow Farm

Camera Direction: Down/Southeast



36: RIMG0431

Description: A pump is located northwest of the Leachate Basin

Location: Southeast end of Longfellow Farm

Camera Direction: Down



37: RIMG0432

Description: The photo shows WSP #1 at Longfellow Farm. Excessive vegetation was located around the WSPs.

Location: Longfellow Farm

Camera Direction: Northwest





38: RIMG0433

Description: WSP #1 is connected to WSP #2 via a pipe. Excessive vegetation was located around the WSPs.

Location: Longfellow Farm

Camera Direction: North



39: RIMG0434

Description: An outlet for manure was located at the southwest end of WSP #1.

Location: Longfellow Farm

Camera Direction: Northeast



40: RIMG0435

Description: Manure solids and feed was observed around an area between barns. This area drains to the waterway. It appeared that much of this waste was due to track out at the barns.

Location: Longfellow Farm

Camera Direction: Southeast



41: RIMG0436

Description: Manure solids and feed was observed around an area between barns. This area drains to the waterway. It appeared that much of this waste was due to track out at the barns.

Location: Longfellow Farm

Camera Direction: Southeast





42: RIMG0437

Description: The cattle walkway appeared to be sloped from west to east.

Location: Longfellow Farm

Camera Direction: East



43: RIMG0438

Description: The tributary that drains through the farm was dry during the inspection.

Location: Longfellow Farm

Camera Direction: Down





44: RIMG0439

Description: Portions of an area adjacent to the barn were not under roof and may drain to the waterway.

Location: Longfellow Farm

Camera Direction: North



45: RIMG0440

Description: Portions of an area adjacent to the barn were not under roof and may drain to the waterway. This area contained a 55-gallon drum without a top and was used for mortalities.

Location: Longfellow Farm

Camera Direction: North

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FOIA Ex. 6 Enterprises, LLC  
September 19-20, 2018





46: RIMG0441

Description: The 55-gallon drum contained a greenish liquid and contained some garbage.

Location: Longfellow Farm

Camera Direction: Down



47: RIMG0442

Description: Track out of feed was observed near the milking parlor area. The puddle was a light brown in color.

Location: Longfellow Site

Camera Direction: North

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48: RIMG0443

Description: A storm water pipe outlet at the north end of the facility.

Location: Longfellow Farm

Camera Direction: South



49: RIMG0444

Description: A wetland area along the northeast end of the facility was holding water. A black pipe entered the area from the southeast end.

Location: Longfellow Farm

Camera Direction: East



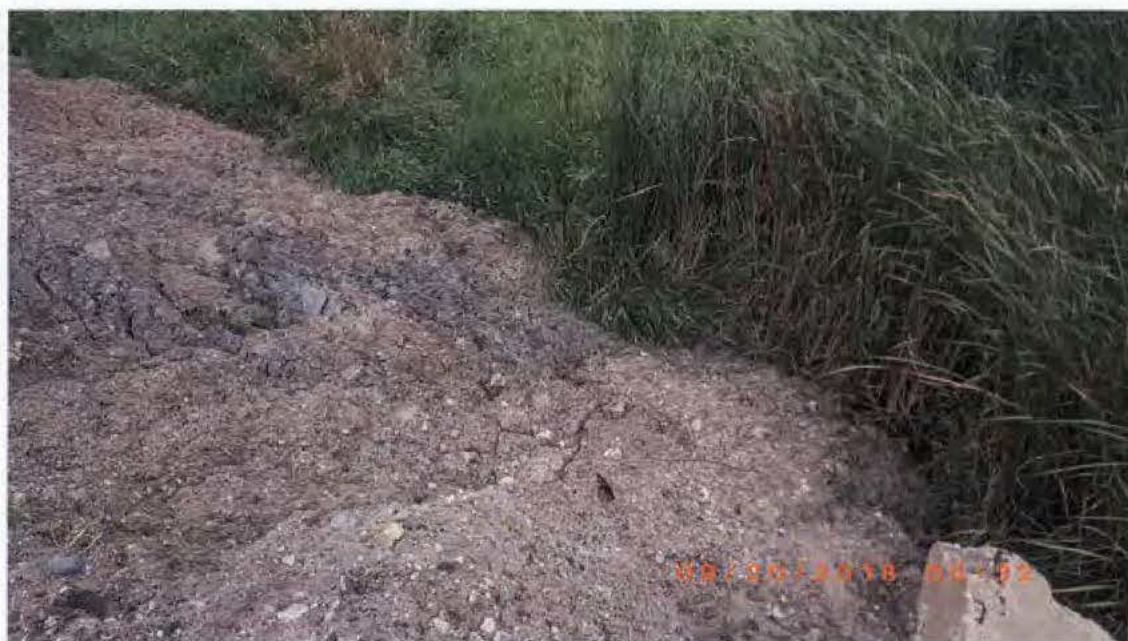


50: RIMG0445

Description: Fill was located along the wetland area that was holding water.

Location: Longfellow Farm

Camera Direction: Down/East



51: RIMG0446

Description: Fill was located along the wetland area that was holding water.

Location: Longfellow Farm

Camera Direction: Down/West



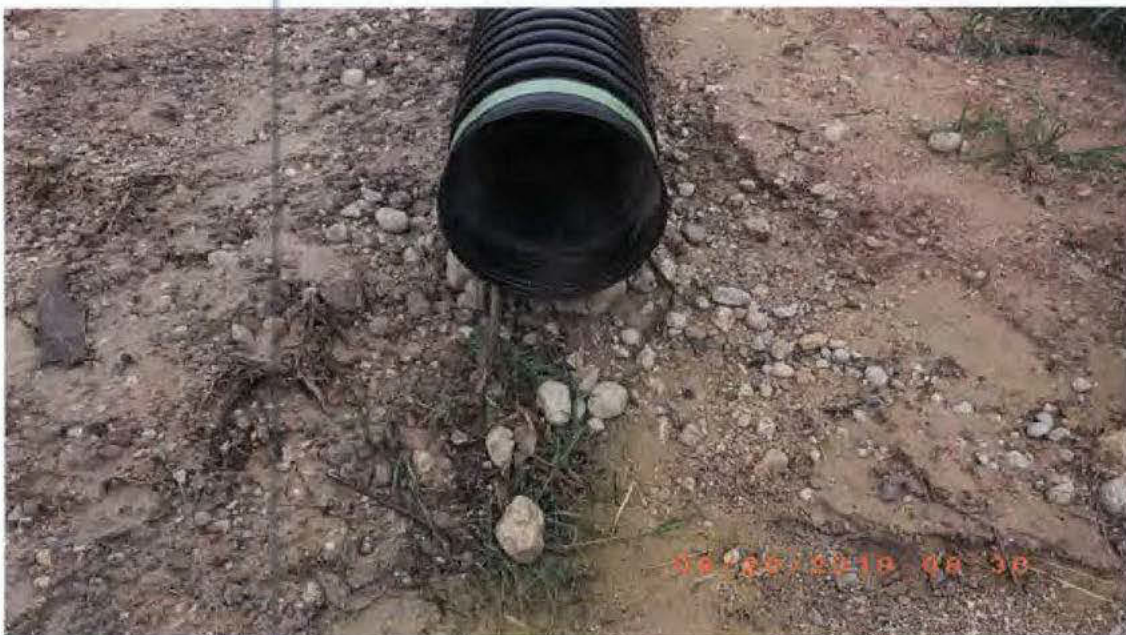


52: RIMG0447

Description: A black storm water drainage pipe outlet toward the wetland area.

Location: Longfellow Farm

Camera Direction: North



53: RIMG0448

Description: A black storm water drainage pipe outlet toward the wetland area.

Location: Longfellow Farm

Camera Direction: West





54: RIMG0449

Description: WSP #1 is piped to WSP #2.

Location: Longfellow Farm

Camera Direction: Southwest



55: RIMG0450

Description: A concreted entrance ramp was installed at the north end of WSP #1.

Location: Longfellow Farm

Camera Direction: West



56: RIMG0451

Description: Depth markers were located on the northeast end of WSP #1.

Location: Longfellow Farm

Camera Direction: Down/Southeast



57: RIMG0452

Description: The northwest corner of the WSP #2 had tire marks extending down the side slope of the berm. The concrete outfall was being undercut at the southeast corner of WSP #2.

Location: Longfellow Farm

Camera Direction: East





58: RIMG0453

Description: The northwest corner of the WSP #2 had tire marks extending down the side slope of the berm. The concrete outfall was being undercut at the southeast corner of WSP #2.

Location: Longfellow Farm

Camera Direction: Down/Southeast



59: RIMG0454

Description: The concrete outfall was being undercut at the southeast corner of WSP #2.

Location: Longfellow Farm

Camera Direction: South



60: RIMG0455

Description: The concrete outfall was being undercut at the southeast corner of WSP #2.

Location: Longfellow Farm

Camera Direction: Southwest



61: RIMG0456

Description: WSP #2 had what appeared to be tire marks in the northwest corner of the sidewall.

Location: Longfellow Farm

Camera Direction: Northwest





62: RIMG0457

Description: A portion of the concrete feed storage area was sloped such that wastewater was flowing off the southern end into a grassed area.

Location: Longfellow Farm

Camera Direction: West



63: RIMG0458

Description: The wastewater had killed vegetation at the point where it flowed off the concrete and dead vegetation was observed approximately 10 feet into the grassed area.

Location: Longfellow Farm

Camera Direction: South





64: RIMG0459

Description: The wastewater had killed vegetation at the point where it flowed off the concrete and dead vegetation was observed approximately 10 feet into the grassed area.

Location: Longfellow Farm

Camera Direction: North



65: RIMG0460

Description: Feed solids were observed on the ground in an area that could drain southeast off the feed storage area.

Location: Longfellow Farm

Camera Direction: Southeast





66: RIMG0461

Description: Feed solids were observed on the ground in an area that could drain southeast off the feed storage area.

Location: Longfellow Farm

Camera Direction: Down/Southeast



67: RIMG0462

Description: Feed solids were observed along the southern end of the barn on the south end of the site.

Location: Longfellow Farm

Camera Direction: West

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68: RIMG0463

Description: Water was draining into the inlet for the old feed storage area.

Location: Main Facility

Camera Direction: Down



69: RIMG0464

Description: Water was draining into the inlet for the old feed storage area.

Location: Main Facility

Camera Direction: Northeast





70: RIMG0465

Description: The entrance into the vegetated treatment area (VTA) had ponded water that was dark in color. The water was located at the pipe outlet and was not observed flowing through the VTA.

Location: Main Facility

Camera Direction: Down



71: RIMG0466

Description: The entrance into the vegetated treatment area (VTA) had ponded water that was dark in color. The water was located at the pipe outlet and was not observed flowing through the VTA.

Location: Main Facility

Camera Direction: Down/West

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72: RIMG0467

Description: At the east end of the VTA water would flow into a ditch that drains south and then east under the road. No water was present in the VTA (except at the entrance), in the ditch, or entering the culvert.

Location: Main Facility

Camera Direction: North



73: RIMG0468

Description: At the east end of the VTA water could flow into a ditch that drains south and then east under the road. A culvert can be seen in the photo. No water was present in the VTA (except at the entrance), in the ditch, or entering the culvert.

Location: Main Facility

Camera Direction: Down/Northwest

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74: RIMG0469

Description: The culvert exits to the east into a wetland.

Location: Main Facility.

Camera Direction: East



75: RIMG0470

Description: The feed bunkers on the southeast end of the site appeared to be releasing leachate as demonstrated by some dead vegetation on the slope.

Location: Main Facility

Camera Direction: Northwest



76: RIMG0471

Description: A farm lane drained from west to east into a storm water inlet.

Location: Main Facility.

Camera Direction: West



77: RIMG0472

Description: A storm water inlet was located near an equipment storage area.

Location: Main Facility

Camera Direction: South





78: RIMG0473

Description: A small amount of sheen was observed on the water surface that drained to the storm water inlet.

Location: Main Facility.

Camera Direction: Down



79: RIMG0474

Description: The northeast corner of WSP #1 at the Main Facility contained a ramp in which solids were pushed.

Location: Main Facility.

Camera Direction: Southwest



80: RIMG0475

Description: WSP #1 flows into WSP #2.

Location: Main Facility

Camera Direction: South



81: RIMG0476

Description: WSP #1 flows into WSP #2.

Location: Main Facility

Camera Direction: East





82: RIMG0477

Description: WSP #2 flows into WSP #3.

Location: Main Facility

Camera Direction: West



83: RIMG0478

Description: WSP #2 outlets into WSP #3.

Location: Main Facility

Camera Direction: West

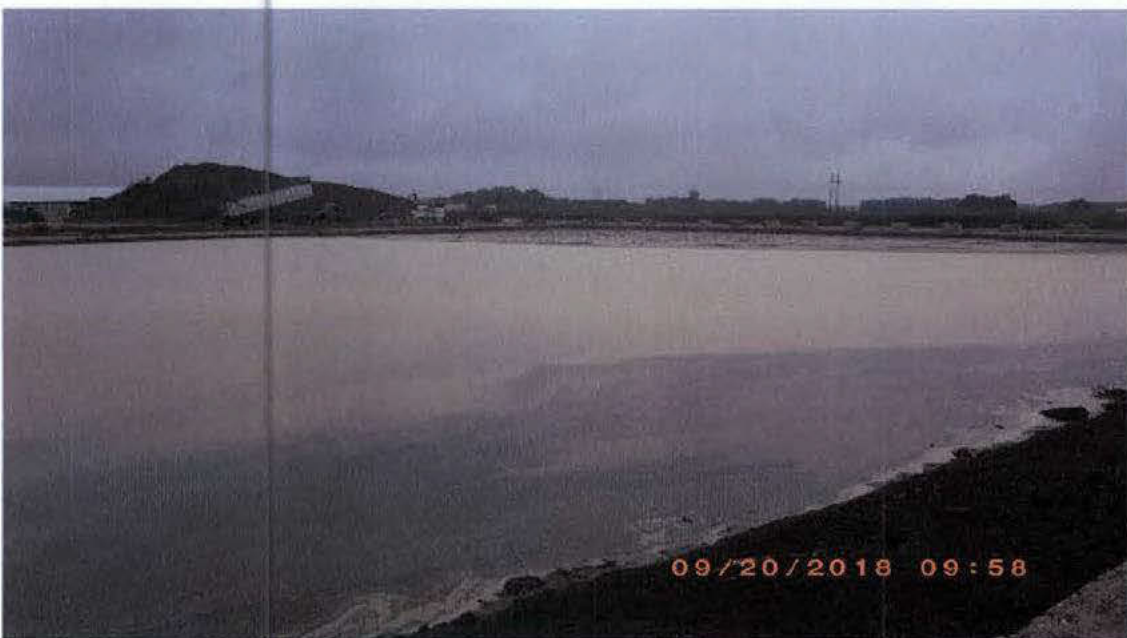


84: RIMG0479

Description: WSP #2 outlets in to WSP #3.

Location: Main Facility

Camera Direction: Southeast



85: RIMG0480

Description: WSP #3.

Location: Main Facility

Camera Direction: Southwest





86: RIMG0481

Description: WSP #3.

Location: Main Facility

Camera Direction: Southeast



87: RIMG0482

Description: A storm water culvert was at the south end of construction site.

Location: Main Facility

Camera Direction: Down





88: RIMG0483

Description: Earthmoving had started at the west end of the Main Facility.

Location: Main Facility

Camera Direction: North



89: RIMG0484

Description: EPA observed a broken silt fence post.

Location: Main Facility

Camera Direction: Northwest





90: RIMG0485

Description: In many locations the bottom of the silt fence had not been anchored properly.

Location: Main Facility

Camera Direction: Down



91: RIMG0486

Description: In many locations the bottom of the silt fence had not been anchored properly.

Location: Main Facility

Camera Direction: Down

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92: RIMG0487

Description: The silt fence posts had not been overlapped properly for sediment and erosion control.

Location: Main Facility

Camera Direction: Down



93: RIMG0488

Description: The silt fence had not covered all areas in which earthmoving had occurred.

Location: Main Facility

Camera Direction: North





94: RIMG0489

Description: The original trench dug for the silt fence had not been used in the northwest corner.

Location: Main Facility

Camera Direction: South



95: RIMG0490

Description: Feed solids were observed blown into the field on the north side of the feed storage area.

Location: Main Facility

Camera Direction: West

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96: RIMG0491

Description: I observed some water in the field north of the feed storage area with a brownish color.

Location: Main Facility

Camera Direction: Down



97: RIMG0492

Description: The north end of the feed storage area.

Location: Main Facility.

Camera Direction: South





98: RIMG0493

Description: A small amount of blown dust was observed adjacent to the building fans. This area drains to a storm water inlet.

Location: Main Facility

Camera Direction: South



99: RIMG0494

Description: A storm water inlet was located between barns.

Location: Main Facility.

Camera Direction: Down/Northwest



100: RIMG0495

Description: The water at the storm water outlet was light brown in color. The final disposition of the storm water pond was unknown.

Location: Main Facility

Camera Direction: Down/Northeast



101: RIMG0496

Description: The pond was located on the east end of the Main Facility.

Location: Main Facility

Camera Direction: North





102: RIMG0497

Description: A storm water pond was located at the center of the facility.

Location: Main Facility

Camera Direction: East



103: RIMG0498

Description: WSP #3 contained depth markers.

Location: Main Facility

Camera Direction: Down/north



104: RIMG0499

Description: The storm water between the calf and heifer barns flowed from west to east.

Location: Main Facility

Camera Direction: West



105: RIMG0500

Description: Track out of manure was observed at the heifer barn which would flow with storm water to the east.

Location: Main Facility

Camera Direction: Northwest





106: RIMG0501

Description: A storm water inlet accepted flow and outlet into a center storm water pond (wetland area).

Location: Main Facility

Camera Direction: Down



107: RIMG0502

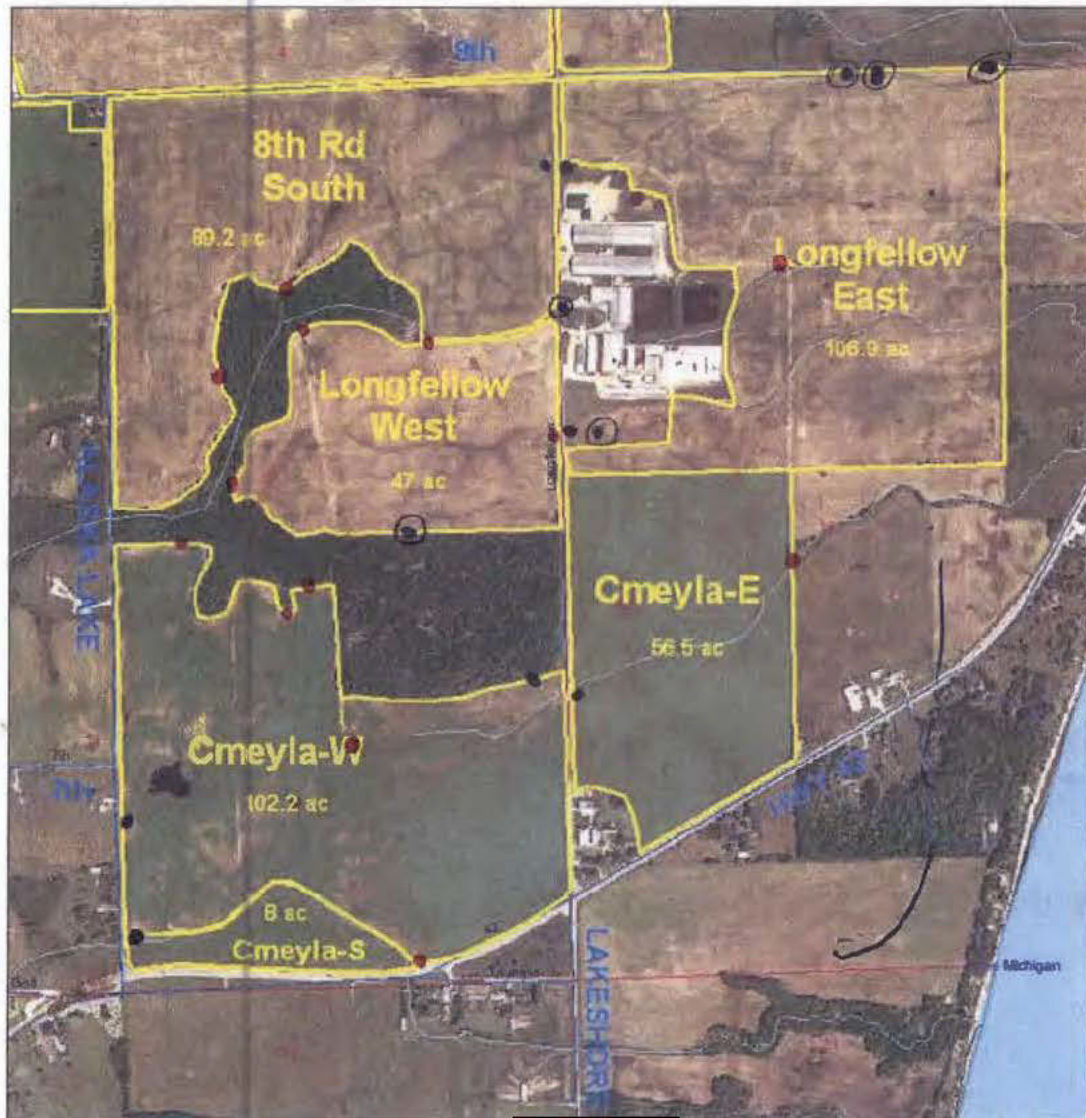
Description: The storm water outlets in the southwest corner of the storm water pond. The final disposition of the pond is unknown. There were no managed outfalls.

Location: Main Facility.

Camera Direction: Northwest

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ATTACHMENT 3: TILE MAP



**Legend**

- FOIA Ex. 6 (Personal Privacy) Enterprises
- wi.edg
- PLSS Sections
- Rivers and Streams



**Enterprises  
Pierce  
Section 17 & 16  
1/11/13**



ATTACHMENT 4: PERMIT RENEWAL APPLICATION



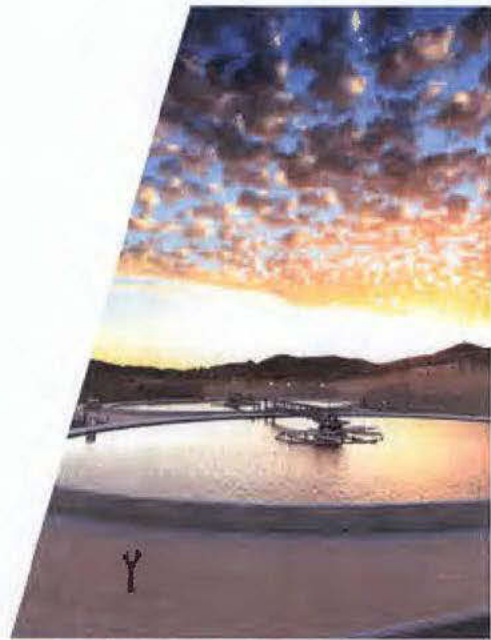
# Wisconsin Pollutant Discharge Elimination System (WPDES) Permit Application Renewal

FOIA Ex. 6  
(Personal  
FOIA Ex. 6  
(Personal

Enterprises, LLC

Personal Privacy)

Algoma, Kewaunee County, Wisconsin







## **Disclaimer**

GHD Services Inc. (GHD) has developed this Wisconsin Pollution Discharge Elimination System (WPDES) Permit Application (WPDES Permit Application) based on information that was disclosed to GHD to the best of the Farmer's knowledge pertaining to the livestock operation for each component of the WPDES Permit Application. GHD is not responsible for data/information that was not properly disclosed, knowingly denied or restricted, or that was otherwise incorrect, or for any resource problem(s) that was not disclosed. It is the Farmer's responsibility to implement and manage the appropriate changes required in this WPDES Permit Application. If they do not follow the schedule of implementation listed in the WPDES Permit Application, GHD is not responsible for any damages, losses, or liability.

The Farmer understands that it is their responsibility to obtain any and all permits that may be required to implement modifications to farm structures or operations required in the WPDES Permit Application and to keep all of the necessary records associated with these modifications. They understand that the WPDES Permit Application was prepared in accordance with the requirements of the Wisconsin Department of Natural Resources (WDNR) and the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) Wisconsin State Office, which generally adopts the requirements of Chapter NR 243 "Animal Feeding Operations".



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Figure 18	Site Plan – Proposed Conditions – FOIA Ex. 6 Enterprises, LLC Main Facility

## Table Index

Table 1	Waste Storage Facility Summary
Table 2	Current Herd Summary
Table 3	Current Manure and Wastewater Quantity Summary
Table 4	Proposed Herd Summary
Table 5	Proposed Manure and Wastewater Quantity Summary



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	Appendix A.1 Main Facility
	Appendix A.2 K Farm
	Appendix A.3 Longfellow Farm
	Appendix A.4 S Farm
	Appendix A.5 54 Farm
Appendix B	Completed Animal Unit Worksheets (Form 3400-025A)
	Appendix B.1 Main Facility
	Appendix B.2 K Farm
	Appendix B.3 Longfellow Farm
Appendix C	Waste Storage Sizing Calculations





# 1. General Operation Items

## 1.1 Introduction

This document presents the Wisconsin Pollution Discharge Elimination System (WPDES) Permit Renewal Application for [FOIA Ex. 6] Enterprises, LLC. (Farm or Site). [FOIA Ex. 6] Enterprises, LLC consists of multiple facilities including the Main Facility located at [Ex. 6 (Personal Privacy)]; the K Farm located at [Ex. 6 (Personal Privacy)] and the Longfellow Farm located at [Ex. 6 (Personal Privacy)]. In addition, the Farm maintains satellite waste storage facilities at the S Farm located at [Ex. 6 (Personal Privacy)] and on 54 Farm located at [Ex. 6 (Personal Privacy)]. The completed permit application for each facility is provided in Appendix A on Form 3400-25 and the completed animal unit worksheets for each facility housing animals are provided in Appendix B on Forms 3400-25A. This permit application complies with WDNR Chapter NR 243, Animal Feeding Operations. [FOIA Ex. 6] Enterprises, LLC currently operates under WPDES Permit No. WI-0062235.

## 1.2 Background Information

[FOIA Ex. 6] Enterprises, LLC, owned and operated by [Ex. 6 (Personal Privacy)] is a dairy farm located in Kewaunee County, Wisconsin. The Main Facility, K Farm and Longfellow Farm are located in the Township of Pierce and the S and 54 Farm are located in the Township Ahnapee. The legal description for each facility is below:

- Main Facility is the [Ex. 6 (Personal Privacy)]
- K Farm is the [Ex. 6 (Personal Privacy)]
- Longfellow Farm is the [Ex. 6 (Personal Privacy)]
- S Farm is the [Ex. 6 (Personal Privacy)]
- 54 Farm is the [Ex. 6 (Personal Privacy)]

References to the Farm throughout this WPDES Application are to the entire operation, including the dairy facility and all fields included in the Nutrient Management Plan (NMP).

A Plat Map showing the general location of each facility is included on Figure 1; a SSURGO soils map for each facility is included on Figures 2 through 6; Figures 7 through 11 present the wetlands and W soils in proximity to each facility; and Figure 12 presents a USGS topographic map of the area. The Farm generally consists of the farmsteads and the acres of land owned, rented or maintained in manure spreading agreements. The Farm parcels are zoned Exclusive agricultural by the Town of Pierce and Ahnapee and land use in the vicinity of the Farm is generally agricultural. The Farm is located in the Ahnapee River and Stony Creek Watershed (HUC 0403010202) and Willow Creek Watershed (LW12), with tributaries to the Lake Michigan Basin.

The Main Facility consists of two (2) milking parlors and holding areas, five (5) freestall barns, a dry cow barn, a maternity barn, a fresh cow barn, two (2) heifer barns, six (6) calf barns, a bedding shed, a machine shed and maintenance shop, an equipment storage shed, three (3) waste storage ponds (WSPs), a manure processing facility, an agronomy office, two (2) commodity storage barns, two (2) feed storage areas with leachate collection systems and one (1) vegetated treatment area,





as shown on Figure 13. There are four (4) existing wells and one (1) well proposed for installation at Main Facility, as summarized in the table below and shown of Figure 13. Proposed changes at the Main Facility include construction of additional feed storage area, concrete collection channel, leachate management pond (LMP) and re-routing the utilities and manure transfer pipeline around the proposed construction.

The K Farm consists of a bedded pack barn and concrete barnyard along Highway K, Calf Barn #1 and #2, two (2) small transition barns, a remodeled dairy barn and concrete barnyard, and a concrete lined barnyard runoff collection pond. A site plan of the K Farm is included in Figure 14. There is one (1) existing well and one (1) well proposed for construction, as shown on the table below and on Figure 14. Additional bedded pack structures will be necessary at the K Farm to accommodate increased numbers of beef cattle. The bedded pack structures will not have waste transfer systems, therefore WDNR Plan and Specification approval is not required. The Farm has not determined a schedule for construction of the additional bedded pack structures at this time.

The Longfellow Farm consists of two (2) four row freestall barns; one (1) three row freestall barn; one (1) heifer/dry cow barn; one (1) special needs barn; one (1) heifer barn; two (2) clay-lined waste storage ponds (WSPs); a concrete lined leachate basin; two (2) commodity sheds, one (1) Harvestore silo; two (2) grain bins and a series of concrete bunker silos, as shown on Figure 15. There are two (2) existing wells at the Longfellow Farm, as shown in the table below and on Figure 15. Two (2) proposed changes at the Longfellow Farm include abandonment of the West Concrete Barnyard (approximately 8,430 square feet) and installation of approximately 220 ft of roof gutter on the west and south sides of the existing freestall barn (216 ft x 103 ft) located west of the feed storage area in order to exclude roof water from the collection system.

Satellite waste storage facilities are maintained at the S Farm and 54 Farm, as shown on Figures 16 and 17. No other structures at these locations are used by FOIA  
b. 6 Enterprises, LLC and no changes at these facilities are proposed during the next permit term. There are two (2) wells at each facility, as shown in the table below and on Figures 16 and 17, respectively. The Slurrystore Tank at 54 Farm is currently being evaluated by Foxland Harvestore, Inc. of Kaukauna Wisconsin, an authorized Slurrystore dealer and CST Industries of DeKalb, Illinois. The engineering evaluation will be provided to WDNR under separate cover.



**Table 1.3 Well Summary**

High Cap #	WI Unique Well No. (Farm ID)	Construction Date	Well Details
74528	XV207 - Main Facility	02/19/2016	186 ft deep with 182 ft of 6 inch casing
70893	WW798 - Main Facility	11/12/2012	662 ft deep with 250 ft of 8 inch casing
70892	SY505 - Main Facility	5/17/2005	200 ft deep with 166 ft of 6 inch casing
70891	MB097 - Main Facility	2/23/1998	200 ft deep with 184 ft of 6 inch casing
74527	Main Facility	Proposed	Well Approved by WDNR 11/13/2015
n/a	K Farm	08/28/1949	Construction Details Not Available
74547	K Farm	Proposed	Well Approved by WDNR 01/01/2015
	DM210 - Longfellow Farm	02/03/2005	220 ft deep with 160 ft of 6 inch casing
74550	MB081 - Longfellow Farm	12/02/1997	223 ft deep with 155 ft of 6 inch casing
n/a	S Farm - East Well	n/a	Construction Details Not Available
n/a	S Farm - West Well	n/a	Construction Details Not Available
n/a	54 Farm	n/a	Construction Details Not Available
n/a	54 Farm	n/a	Construction Details Not Available

Animals at **FOIA Ex. 6** Enterprises, LLC are held in total confinement with the exception of the concrete lots at the K Farm and the concrete barnyard at the Longfellow Farm.

Manure from the animal housing is handled through WDNR-approved manure storage and transfer systems in place at the Farm. The manure separation and manure storage structures at **FOIA Ex. 6** Enterprises, LLC have been designed to meet appropriate USDA-NRCS practice standards to further ensure that groundwater impacts do not occur.

### 1.3 Previous 5-Year Permit Summary

Over the past 5-year permit term **FOIA Ex. 6** Enterprises, LLC has made several upgrades and additions. Plan and Specification packages were submitted to the WDNR and Kewaunee County Land and Water Conservation Department (LWCD) for review and approval prior to construction, and post-construction documentation was submitted upon completion. A summary of the changes made during the previous 5-year permit term, January 1, 2014 through December 31, 2018, is provided below:

- On May 8, 2014, WDNR approved plans for construction of a feed storage pad at the Main Facility (File Ref: R-2014-0079). The feed storage pad is 600 ft by 300 ft with a 6-inch thick fiber mesh reinforced concrete slab and 1.5-inch asphalt work surface, complete with drain tile beneath the pad. As part of the WDNR approval, an annual site inspection was required to be completed by NRCS State Engineer, John Ramsden or his designee each year to view the performance of the fiber mesh concrete as part of the research process for updates to Wisconsin Construction Specification 4-Concrete. Site inspections of the fiber mesh feed pad were completed by Ramsden in 2015 and 2016. When the 2018 inspection was requested, Ramsden recommended that no further inspections were warranted as the fiber mesh concrete pad is performing as expected. A post-construction report was submitted to WDNR on October 16, 2014 with an addendum to the post construction report submitted on October 23, 2015.





- On December 1, 2014, a manure transfer pipeline extension of approximately 3,324 ft was approved by WDNR to connect existing riser pipes at the Longfellow Farm to the Main Facility (File Ref: R-2014-0248). The manure transfer pipeline consists of 8-inch diameter DR18 PVC pipe. A post-construction report was submitted to WDNR on July 2, 2015.
- On July 2, 2015, WDNR approved plans for construction of a manure and sand separation system and flush flume transfer system at the Main Facility (File Ref: R-2015-0094). The flush flume system replaced the existing manure transfer channels inside Freestall Barns #1, #2 and #3 with an 18 and 24 inch HDPE N12 transfer pipe. The manure and sand separation building is 192 ft by 80 ft and contains two (2) Wieser W20000 reception tanks, sand lanes, transfer pipes, stacking area and a McLanahan VD6 sand separator. A post construction report was submitted to WDNR on February 22, 2016 with an addendum to the post-construction report submitted May 20, 2016.
- On August 21, 2015, WDNR approved plans for a shallow holding area tank, concrete channel and waste transfer pipelines for flushing manure and wastewater from the new milking parlor holding area (File Ref: R-2015-0157). A post construction report was submitted to WDNR on February 22, 2016.
- A WPDES permit modification effective October 1, 2015 was issued to include an animal unit threshold of up to 8,677 animal units.
- On August 5, 2016, WDNR approved the evaluations for WSP #1 and WSP #2 at the S Farm for use under Ebert Enterprises, LLC WPDES Permit WI-0062235 (File Ref: R-2016-0074). In addition, a well setback waiver was issued to allow WSP #1 to be located within 250 ft of a groundwater supply well (File Ref: R-2016-0074).

## **2. Manure Storage**

The Farm currently uses the following waste storage facilities. The total volume, freeboard volume, 25-year, 24-hour storm volume and usable volumes for each structure are included in Table 1 and the waste storage and leachate pond sizing calculations are included in Appendix C.

- WSP #1 (Main Facility) – a concrete lined waste storage pond with an approximate top area of 26,581 ft<sup>2</sup> by 14 ft deep. The usable capacity of the storage is approximately 1,544,380 gallons.
- WSP #2 (Main Facility) – a concrete lined waste storage pond with an approximate top area of 78,663 ft<sup>2</sup> by 14 ft deep. The usable capacity of the storage is approximately 5,692,377 gallons.
- WSP #3 (Main Facility) – a concrete lined waste storage pond with an approximate top area of 111,450 ft<sup>2</sup> by 14.5 ft deep. The usable capacity of the storage is approximately 8,534,645 gallons.
- Runoff Collection Pond (K Farm) – a concrete lined waste storage pond with an approximate top area of 27,730 ft<sup>2</sup> by 14 ft deep. The usable capacity of the storage is approximately 1,085,871 gallons.
- WSP #1 (Longfellow Farm) – a clay lined waste storage pond with an approximate top area of 289 ft by 256 ft by 17 ft deep. The usable capacity of the storage is approximately 5,844,619 gallons.





- WSP #2 (Longfellow Farm) – a clay lined waste storage pond with an approximate top area of 265 ft by 245 ft by 25.2 ft deep. The usable capacity of the storage is approximately 5,172,742 gallons.
- Leachate Basin (Longfellow Farm) – a concrete lined leachate storage pond with an approximate top area of 97 ft by 100 ft by 7.5 ft deep. The usable capacity of the storage is approximately 268,314 gallons.
- WSP #1 (S Farm) – an earthen lined waste storage pond with a concrete bottom and an approximate top area of 85 ft by 85 ft by 4.3 ft deep. The usable capacity of the storage is approximately 118,182 gallons.
- WSP #2 (Laluzerne Farm) – an in-place earth waste storage pond with an approximate top area of 210 ft by 105 ft by 15 ft deep. The usable capacity of the storage is approximately 1,215,476 gallons.
- 54 Slurrystore Tank (54 Farm) – a round Slurrystore tank with an approximate dimensions of 101 ft in diameter by 20 ft deep. The usable capacity of the storage is approximately 1,117,169 gallons.

Based on the total useable capacity available among the facilities, FOIA  
b6 Enterprises, LLC has a useable liquid storage capacity of 30,593,775 gallons for storage of liquid manure and wastewater. Following construction of the new leachate pond, the total usable liquid storage capacity will be 35,945,725 gallons.

### **3. Manure and Wastewater Production**

#### **3.1 Current Operations**

Sources of manure and wastewater on the Farm include milking cows, dry cows, heifers, calves and beef cattle, silage leachate and precipitation runoff from the feed storage areas, milking parlor wastewater, and precipitation less evaporation on the surface of the waste storage ponds. Manure quantity estimates are based on USDA-NRCS book values including dilution factors and historic Farm records.

The Farm currently houses 4,350 milking and dry cows, 1,075 heifers (800-1,200 pounds (lbs)), 727 heifers (400-800 lbs), 2,279 calves (0-400 lbs) and 484 beef cattle (400 lb-market) for a total of 8,915 animals or 8,649 animal units (AUs), as shown in Table 2. Annual manure and wastewater volumes generated on the Farm include 45,048,893 gallons of manure and 17,050,422 gallons of wastewater from silage leachate and precipitation runoff from the Main Facility and Longfellow Farm, precipitation on the concrete barnyard surface at the K Farm and precipitation less evaporation on the surfaces of the waste storage ponds and leachate storage pond, for a total annual manure and wastewater production of 62,099,315 gallons, as shown in Table 3. In addition, approximately 28,235 tons of solid manure and discarded bedding are currently produced annually on the Farm.

The estimated breakdown of manure and wastewater, silage leachate and precipitation runoff generated on the Farm on an annual basis is as follows:





**Table 3.1 Existing Annual Manure and Wastewater Production Summary**

Source	Estimate Volume
Liquid Manure	45,048,893 gallons
Silage Leachate (Main Facility Old Feed Storage)	74,800 gallons
Precipitation Runoff (Main Facility Old Feed Storage)	818,297 gallons
Silage Leachate (Longfellow Farm)	108,460 gallons
Precipitation Runoff (Longfellow Farm)	3,110,643 gallons
Silage Leachate (Main Facility)	299,200 gallons
Precipitation Runoff (Main Facility)	5,319,898 gallons
Precipitation Runoff (K Farm Concrete Barnyard)	1,863,270 gallons
Precipitation minus Evaporation – WSPs & Leachate Basin	<u>5,455,855 gallons</u>
<b>Total Annual Liquid Production:</b>	<b>62,099,315 gallons</b>

As shown in Table 3, the usable capacity of the existing waste storage structures and leachate pond on the Farm is approximately 30,593,775 gallons. Based on this usable capacity and the current annual production of manure and wastewater, silage leachate, feed pad precipitation runoff, concrete barnyard precipitation runoff and precipitation less evaporation on the surfaces of the ponds of 62,099,315 gallons, there are approximately 180 days of storage capacity available for liquid manure and wastewater.

### **3.2 Proposed Expansion**

Within the next 5-year permit term, the Farm will expand to house 5,000 milking and dry cows, 1,100 heifers (800-1,200 lbs), 1,100 heifers (400-800 lbs), 2,200 calves (0-400 lbs) and 1,300 beef cattle (400 lb-market) for a total of 10,700 animals or 10,610 AUs, as shown in Table 4. While there will be modest growth in animal numbers at the Main Facility and Longfellow locations due the Farm's low cull rate and internal growth, the majority of the growth in animals will take place at the K Farm as the beef raising enterprise grows.

In addition, the Farm plans to expand the existing feed storage area and construct a new leachate management pond at the Main Facility. Following construction of the additional feed pad and leachate pond, the Farm plans to separate manure storage from silage leachate and feed pad precipitation runoff storage from the Main Facility and Longfellow Farms. Silage leachate and precipitation runoff from the Longfellow Farm and the western feed area at the Main Facility will be stored in the proposed leachate management pond. Note that a small portion of the silage leachate and precipitation runoff from the Longfellow Farm will be stored in the existing Longfellow WSP #2 during design storms only. Precipitation runoff and silage leachate from the Old Feed Storage Area at the Main Facility will continue to be treated through the existing VTA and stored in the existing Main Facility WSP #2 using the previously WDNR approved leachate collection system.





### 3.2.1 Comingled Manure and Wastewater

The annual manure and wastewater volumes generated on the Farm that will be comingled in the waste storage ponds will include approximately 52,545,218 gallons of manure and 8,168,089 gallons of wastewater from silage leachate and precipitation runoff from the Old Feed Storage Area at the Main Facility, a portion of precipitation runoff from Longfellow Farm during design storm events only, precipitation on the concrete barnyard surface at the K Farm and precipitation less evaporation on the surfaces of the waste storage ponds, for a total volume of 60,713,307 gallons, as shown in Table 5. In addition, approximately 43,943 tons of solid manure and discarded bedding will be produced annually on the Farm.

The estimated breakdown of manure and wastewater generated on the Farm that will be comingled in the existing waste storage ponds will be as follows:

**Table 3.2 Proposed Annual Manure and Wastewater Production Summary**

Source	Estimate Volume
Liquid Manure	52,545,218 gallons
Silage Leachate (Main Facility Old Feed Storage)	74,800 gallons
Precipitation Runoff (Main Facility Old Feed Storage)	818,297 gallons
Precipitation Runoff (Portion from Longfellow Farm)	78,850 gallons
Precipitation Runoff (K Farm Concrete Barnyard)	1,863,270 gallons
Precipitation minus Evaporation – WSPs only	<u>5,322,873 gallons</u>
<b>Total Annual Liquid Production:</b>	<b>60,713,307 gallons</b>

As shown in Table 5, the usable capacity of only the waste storage structures on the Farm is approximately 30,325,461 gallons. Based on this usable capacity and the proposed annual production of comingled manure and wastewater of 60,713,307 gallons, there are approximately 182 days of storage capacity available for liquid manure and wastewater.

### 3.2.2 Silage Leachate and Precipitation Runoff

The annual wastewater volumes generated on the Farm from silage leachate and feed pad precipitation runoff storage at the Main Facility and Longfellow Farm will be stored separately from manure storage in the existing and proposed leachate structures. This volume will include approximately 11,668,176 gallons of wastewater, as shown in Table 5.

The estimated breakdown of wastewater generated on the Farm that will be stored separately in the existing leachate basin at Longfellow Farm and the proposed leachate management pond at the Main Facility will be as follows:





**Table 3.3 Proposed Annual Leachate Production Summary**

Source	Estimate Volume
Silage Leachate (Longfellow Farm)	108,460 gallons
Precipitation Runoff (Longfellow Farm)	2,640,569 gallons
Silage Leachate (Main Facility)	407,660 gallons
Precipitation Runoff (Main Facility)	7,269,618 gallons
Precipitation minus Evaporation – Leachate ponds only	<u>1,241,869 gallons</u>
<b>Total Annual Liquid Production:</b>	<b>11,668,176 gallons</b>

As shown in Table 5, the usable capacity of only the leachate storage structures on the Farm is approximately 4,620,264 gallons. Based on this usable capacity and the proposed annual production of leachate, feed pad precipitation runoff and precipitation less evaporation on the surface of the leachate pond of 11,668,176 gallons, there are approximately 145 days of storage capacity available for liquid wastewater.

## **4. Manure and Wastewater Transfer Systems**

Sources of manure and wastewater on the Farm include milking cows, dry cows, heifers, calves and beef cattle, silage leachate and precipitation runoff from the feed storage areas, milking parlor wastewater, and precipitation less evaporation on the surface of the waste storage and leachate ponds. Manure quantity estimates are based on USDA-NRCS book values including dilution factors and historic Farm records.

### **4.1 Main Facility**

At the Main Facility, manure from the freestall barns is manually scraped with a skid steer three times a day to a flush flume in the center of the freestall barns and then to the sand separation building where sand and manure solids are separated from the waste stream. Recycled sand and manure solids are reused as bedding. Separated manure solids are stacked on the concrete pad next to the separation building and are hauled to the K Farm and Longfellow Farm for use as bedding. Any runoff from this area gravity drains into WSP #3. Separated sand is stored on the stacking area inside the solids separation building. Following separation, remaining liquid is pumped to the WSPs. Solid manure and bedding from the hospital barn is collected every month and temporarily stacked north of the milking parlor prior to transferring it to crop fields according to the Farm's NMP or it is stored with the separated manure solids. Milking parlor wastewater is used in the sand separation process. The separation system design employs a closed loop where water for flushing the flume and washing sand is recycled from uses on the Farm.

### **4.2 K Farm**

At the K Farm, manure and bedded pack is scraped from the concrete barnyards daily into the runoff collection pond. The bedded pack barns are cleaned four times each year and manure is land applied according to the Farm's NMP.





### 4.3 Longfellow Farm

At the Longfellow Farm manure from freestall barns #1, #2 and the special needs barn is scraped with a skid steer into a barn cleaner channel which discharges into WSP #1. Manure from the three row freestall barn and heifer/dry cow freestall barn is scraped with a skid steer into a reception tank and pumped to WSP #1. The manure from the southernmost heifer barn is handled as bedded pack and land applied according to the Farm's NMP when the bedded packs are cleaned.

## 5. Nutrient Management Plan

The primary goal of the cropping plan is to meet the nutritional needs of the animals housed on Farm. The Farm has adopted a WDNR-approved NMP conforming to NR 243.14 and applicable CPS 590 – Nutrient Management standards that is updated annually. The NMP accounts for the manure and wastewater volumes generated during day to day farming activities that are used as fertilizer for crops via land application. Land application procedures are planned and implemented in a way that minimizes potential adverse impacts to the environment and public health. The NMP is prepared and updated annually by Ex. 6 (Personal Privacy) of AgSource Laboratories in Bonduel, Wisconsin. The NMP will be submitted to the WDNR under separate cover.

## 6. Changes for WDPES Permit Renewal

During the next WDPES permit term, FOIA Ex. 6 Enterprises, LLC plans to complete the following items:

- Main Facility - Construction of additional feed storage area, concrete collection channel, leachate management pond (LMP) and re-routing the utilities and manure transfer pipeline around the proposed construction. Plans and Specification for these upgrades were submitted to the WDNR Online Permitting System by GHD (see GHD Report 053142(37)).
- Longfellow Farm - Abandonment of the West Concrete Barnyard (approximately 8,430 square feet) and installation of approximately 220 ft of roof gutter on the west and south sides of the existing freestall barn (216 ft x 103 ft) located west of the feed storage area in order to exclude roof water from the collection system.
- 54 Farm - Complete an engineering evaluation of the existing Harvestore tank. The evaluation will be completed by Foxland Harvestore, Inc. of Kaukauna Wisconsin, an authorized Slurrystore dealer, and CST Industries of DeKalb, Illinois. The engineering evaluation will be provided to WDNR under separate cover.
- Install permanent markers (margin of safety and maximum operating level) in all liquid manure and process wastewater storage facilities. Marker installation will be completed by December 31, 2018.
- Install fencing around liquid manure and process waste storage facilities. Fencing installation will be completed by December 31, 2018.

## Figures



# Ex. 6 (Personal Privacy)

Source: Kewaunee County

0 1,000 2,000 3,000 ft



FOIA Ex. 6  
(Personal) ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION

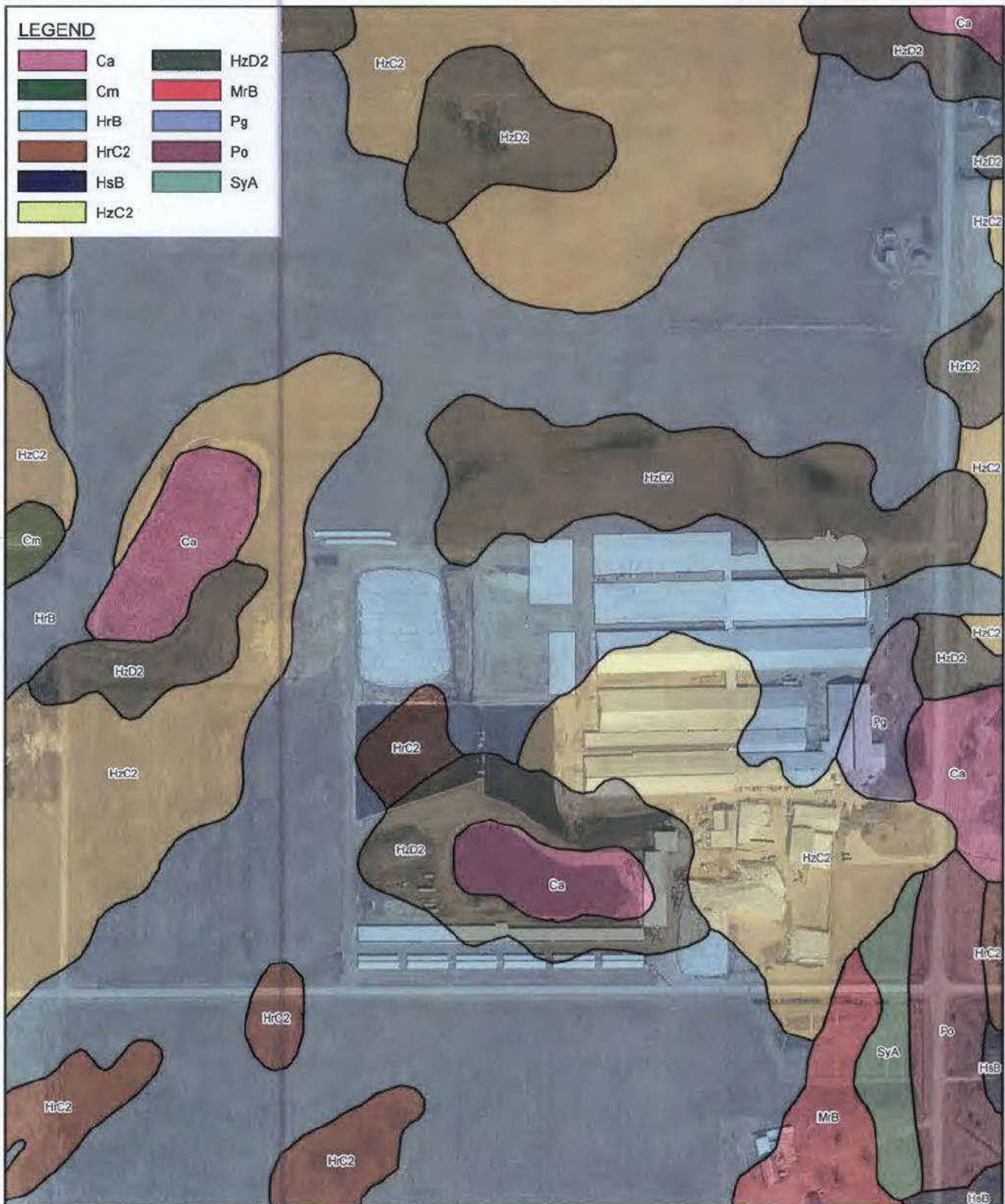
053142-53  
Jun 29, 2018

PLAT MAP

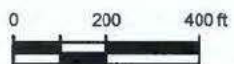
FIGURE 1

# LEGEND

Ca	HxD2
Cm	MrB
HrB	Pg
HrC2	Po
HsB	SyA
HxC2	



Source: USDA FSA Natural Resources Conservation Service



FOIA Ex. 6  
 ENTERPRISES, LLC  
 KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 SSURGO SOILS MAP  
 MAIN FACILITY

053142-53  
 Jun 21, 2018

FIGURE 2





Source: USDA FSA Natural Resources Conservation Service

0 50 100 150 ft



FOIA Ex. 6  
Personal  
ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION  
SSURGO SOILS MAP  
K FARM

053142-53  
Jun 21, 2018

FIGURE 3





**LEGEND**

- HrB
- HrC2
- HsB
- Pe
- SyA

Source: USDA FSA Natural Resources Conservation Service

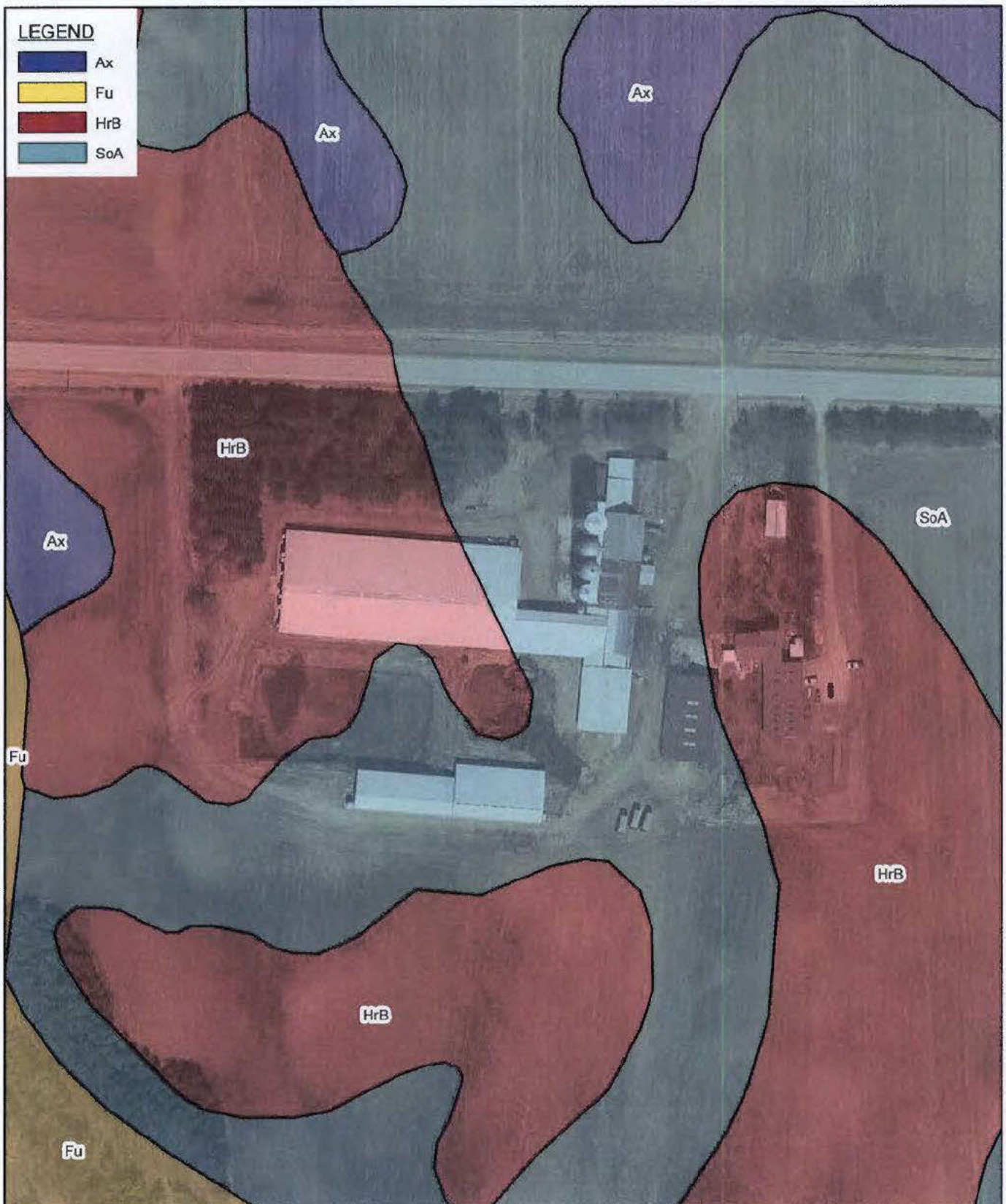


FOIA EX. 6  
Personal  
ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION  
SSURGO SOILS MAP  
LONGFELLOW FARM

053142-53  
Jun 21, 2018

**FIGURE 4**





Source: USDA FSA Natural Resources Conservation Service

0 50 100 150 ft



FOIA Ex. 6  
(Personal)  
ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION  
SSURGO SOILS MAP  
S FARM

053142-53  
Jun 29, 2018

FIGURE 5





Source: USDA FSA Natural Resources Conservation Service

0 50 100 150 ft

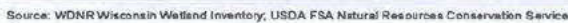


FOIA Ex. 6  
 ENTERPRISES, LLC  
 KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 SSURGO SOILS MAP  
 54 FARM

053142-53  
 Jun 29, 2018

FIGURE 6








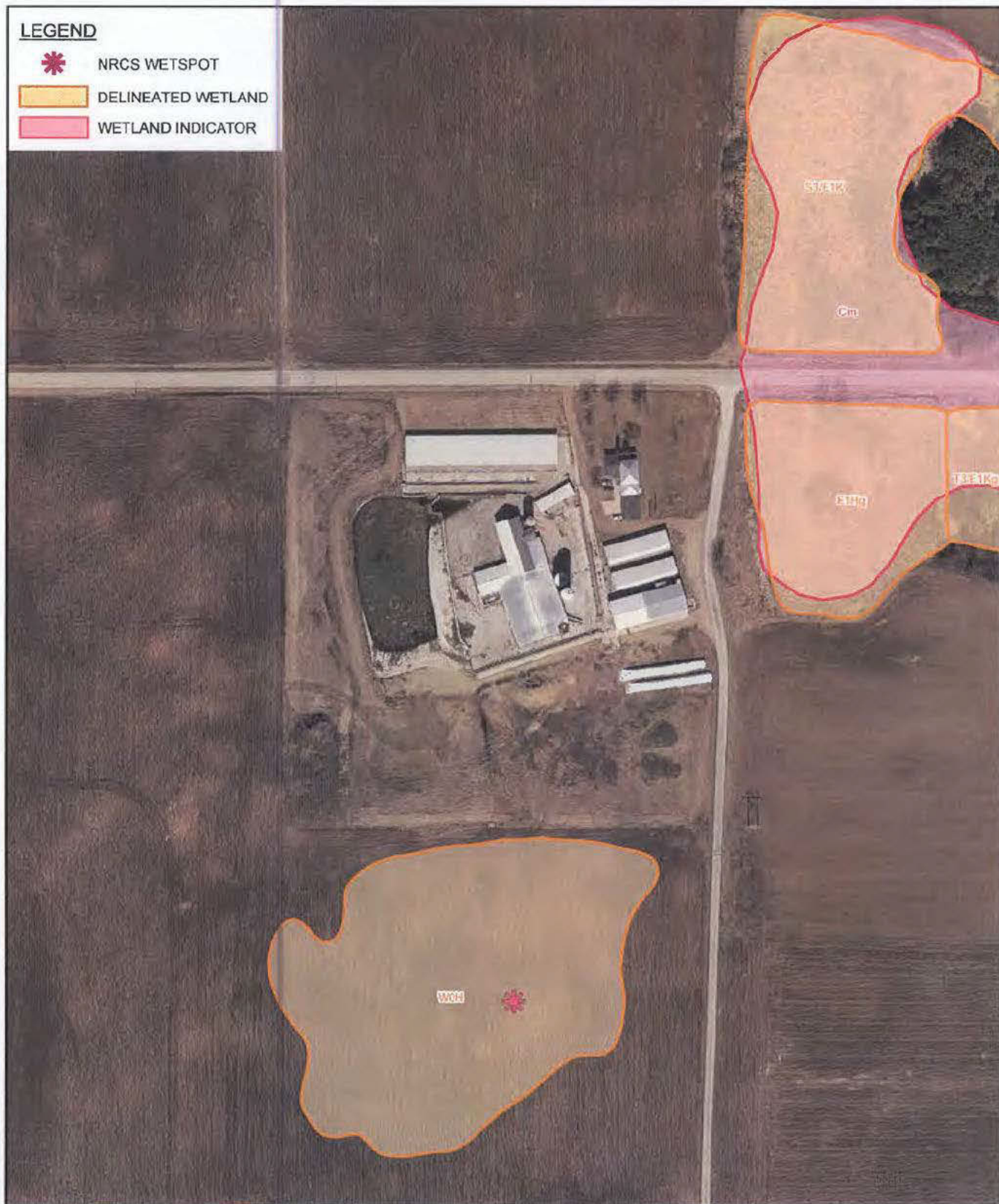
053142-53  
Jun 21, 2018

GIS File: \\GIS\Projects\B-char\05-10531-1053142\053142-REPORTS\053142-53\036\053142-53\036\GIS-SP007.mxd



# LEGEND

-  NRCS WETSPOT
-  DELINEATED WETLAND
-  WETLAND INDICATOR



Source: WDNR Wisconsin Wetland Inventory; USDA FSA Natural Resources Conservation Service

0 100 200 ft

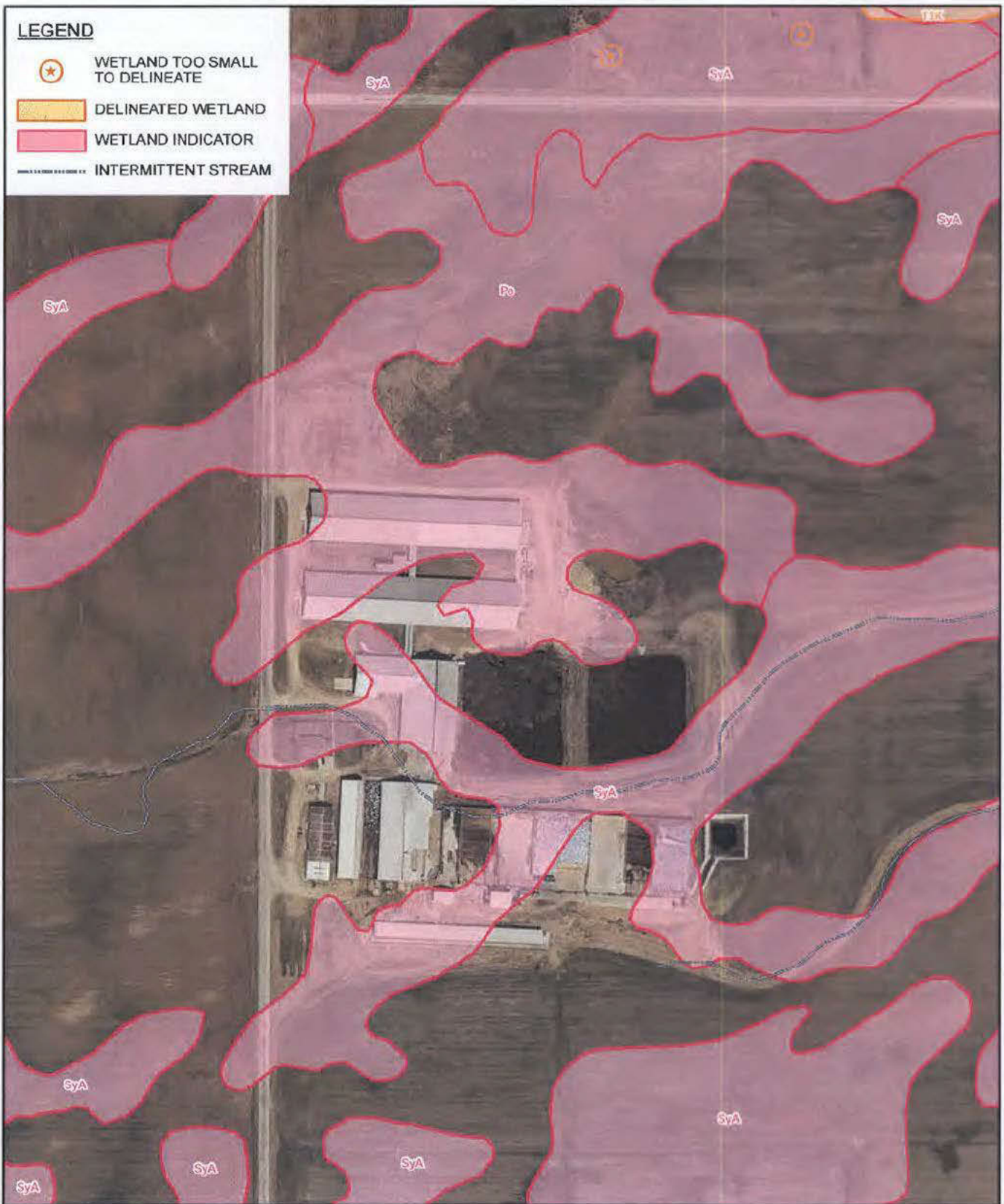


FOIA EX. 6  
 ENTERPRISES, LLC  
 KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 WETLANDS AND W SOILS  
 K FARM

053142-53  
 Jun 21, 2018

FIGURE 8





Source: WDNR Wisconsin Wetland Inventory; USDA FSA Natural Resources Conservation Service

0 100 200 300ft




FOIA EX. 6  
(Personal)




**ENTERPRISES, LLC**  
**KEWAUNEE COUNTY, WISCONSIN**  
**WPDES PERMIT RENEWAL APPLICATION**  
**WETLANDS AND W SOILS**  
**LONGFELLOW FARM**

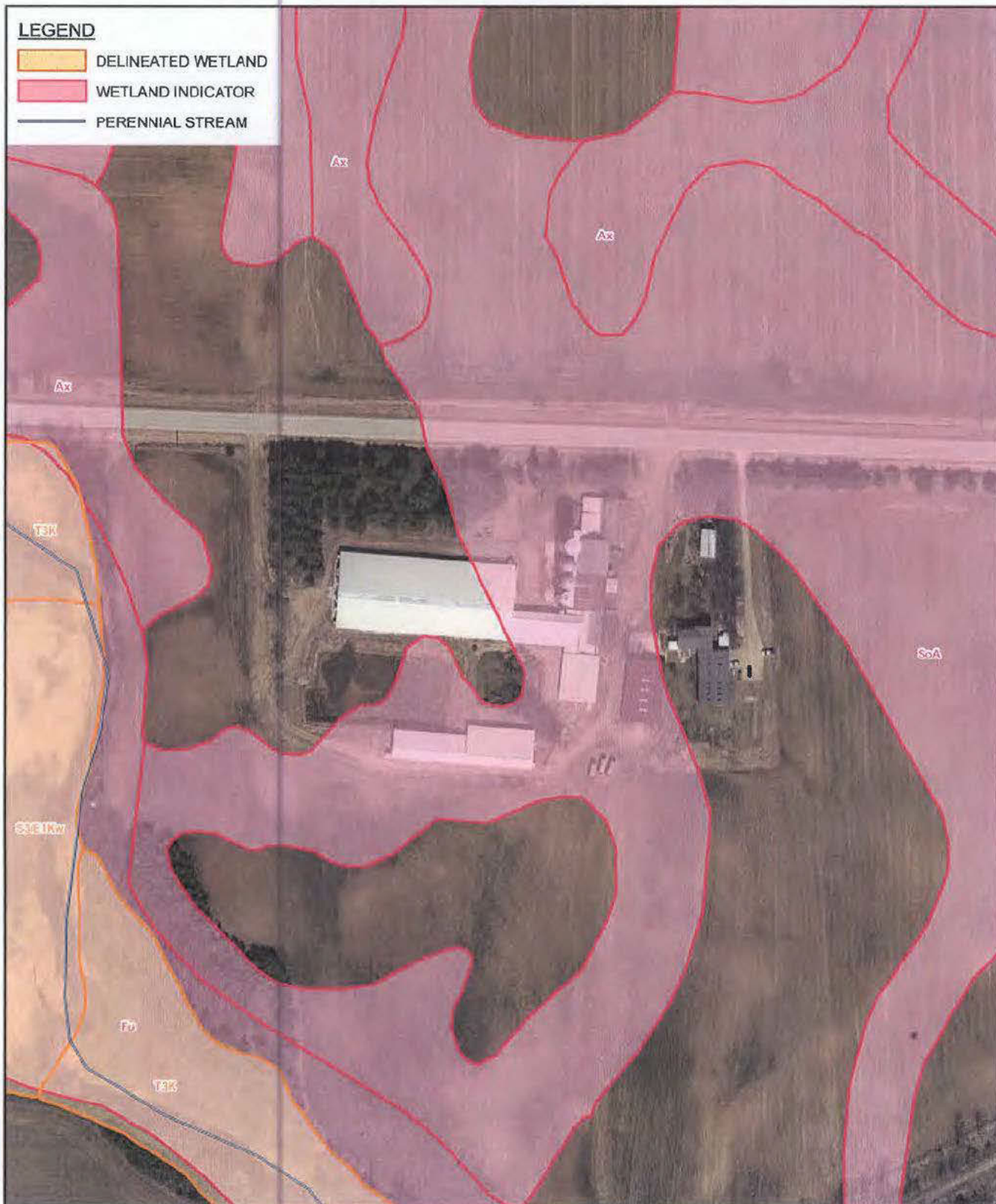
053142-53  
 Jun 21, 2018

**FIGURE 9**



# LEGEND

-  DELINEATED WETLAND
-  WETLAND INDICATOR
-  PERENNIAL STREAM



Source: WDNR Wisconsin Wetland Inventory, USDA FSA Natural Resources Conservation Service

0 100 200 ft



FOIA EX. 6 ENTERPRISES, LLC  
 (Personal) KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 WETLANDS AND W SOILS  
 S FARM

053142-53  
 Jun 29, 2018

FIGURE 10



# LEGEND



WETLAND TOO SMALL TO DELINEATE



EXCAVATED POND



DELINEATED WETLAND



WETLAND INDICATOR



PERENNIAL WATERBODY



Source: WDNR Wisconsin Wetland Inventory; USDA FSA Natural Resources Conservation Service



FOIA EX. 6  
(Personal)  
ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION  
WETLANDS AND W SOILS  
54 FARM

053142-53  
Jun 29, 2018

FIGURE 11

# Ex. 6 (Personal Privacy)

Source: USGS 7.5 Minute Quads - Casco, Algoma

0 1,000 2,000 3,000 ft



FOIA Ex. 6  
Personal ENTERPRISES, LLC  
KEWAUNEE COUNTY, WISCONSIN  
WPDES PERMIT RENEWAL APPLICATION

053142-53  
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TOPOGRAPHIC MAP

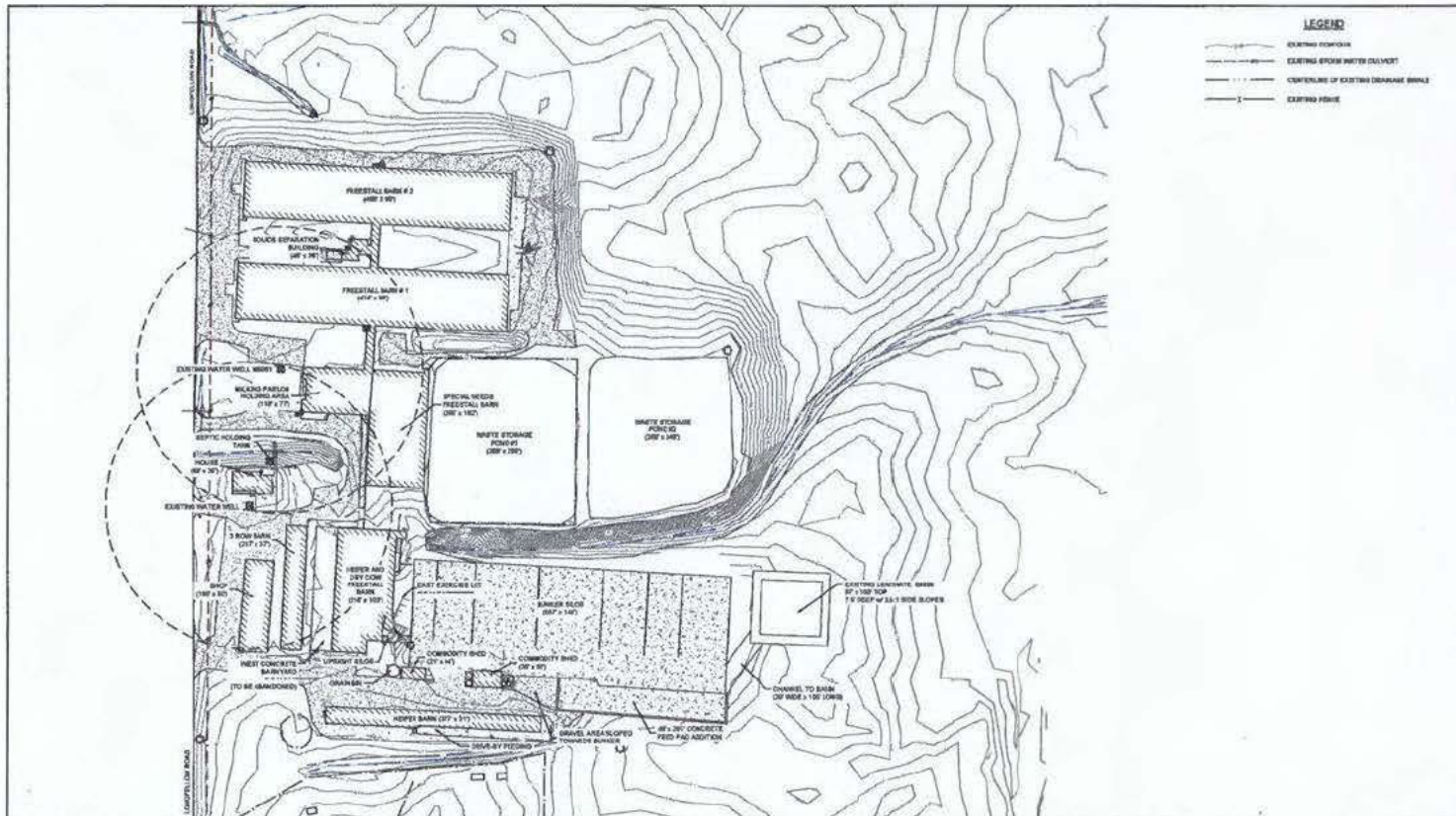
FIGURE 12





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# LEGEND

- WATER SUPPLY WELL
- 250-FT WELL SETBACK



Source: Kewaunee County



FOIA Ex. 6  
 ENTERPRISES, LLC  
 KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 EXISTING CONDITIONS  
 S FARM

053142-53  
 Jun 29, 2018

FIGURE 16





Source: Kewaunee County



FOIA Ex. 6  
 ENTERPRISES, LLC  
 KEWAUNEE COUNTY, WISCONSIN  
 WPDES PERMIT RENEWAL APPLICATION  
 EXISTING CONDITIONS  
 54 FARM

053142-53  
 Jun 29, 2018

FIGURE 17



240 File P:\drawing\630006\6314763143-REPORT\63143-53038\63143-53038\J-VIA002.dwg



## Tables

Table 1

Waste Storage Pond Summary  
**FOIA** Enterprises, LLC  
 Algoma, Kewaunee County, Wisconsin

Location	Name	Structure								
		Area (ft <sup>2</sup> )	Total Depth (ft)	Total Capacity (gal)	Useable Depth (ft)	Useable Capacity <sup>(1)</sup> (gal)	25-yr, 24-hr Storm on Pond Surface (gal)	Freeboard Depth (ft)	Freeboard (gal)	Accumulated Solids <sup>(2)</sup> (gal)
Main Facility - N3969 County D	WSP #1 (Concrete Lined)	26,581	14	1,806,821	12.63	1,544,380	69,485	1	192,957	0
	WSP #2 (Concrete Lined)	78,663	14	6,482,238	12.63	5,692,377	211,230	1	578,631	0
	WSP #3 (Concrete Lined)	111,450	14.5	9,655,670	13.13	8,534,645	300,098	1	820,926	0
K Farm - 5083 Highway K	Runoff Pond (Concrete Lined)	27,730	14	1,358,149	12.61	1,085,871	74,326	1	197,952	0
Longfellow Farm - N6388 Longfellow Road	WSP #1 (Clay Lined)	289' x 256'	17	7,247,527	13.61	5,844,619	211,269	1	545,287	646,352
	WSP #2 (Clay Lined)	265' x 245'	25.2	8,031,415	17.61	5,172,742	161,054	5	2,324,628	372,991
	Bunker Detention Basin	97' x 100'	7.5	363,248	6.10	268,314	25,999	1	68,934	0
S Farm - E5641 County S	WSP #1 (Earthen sides/Concrete Bottom)	85' x 85'	4.3	188,533	2.92	118,182	18,812	1	51,540	0
	WSP #2 (In Place Earth)	210' x 105'	15	1,548,360	11.62	1,215,476	59,655	1	160,261	112,968
54 Farm - E5041 State Road 54	Dad's Skunystore Tank	8,012	20	1,198,572	18.64	1,117,169	21,474	1	59,929	0
Total =				37,880,533		30,593,775	1,153,402		5,001,045	1,132,311

## Notes

(1) Volumes from tributary areas included within usable capacity.

(2) Two (2) foot of accumulated solids assumed in the bottom of clay or earthen lined structures.



Table 2

Current Herd Summary  
**FOIA** Enterprises, LLC  
 Algoma, Wisconsin

Livestock Type	Numbers	Average Weight (lb)	Animal Equivalency Factor <sup>(1)</sup>	AU <sup>(2)</sup>	Location and Housing Type
<b>Main Facility</b>					
Milking Cows	3,800	1,300	1.4	5,320	Main Dairy Freestall Barns
Dry Cows	550	1,400	1.4	770	Main Dairy Freestall Barns
Heifers	75	800 - 1200	1.1	83	Main Dairy Freestall Barns
Heifers	13	400 - 800	0.6	8	Main Dairy Calf Barns
Calves	1,326	0 - 400	0.2	265	Main Dairy Calf Barns
<b>Sub-total</b>	<b>5,764</b>			<b>6,446</b>	
<b>K Farm</b>					
Beef Cattle	484	400 - Market	1.0	484	K Farm Barnyard and Outdoor Lot
Calves	311	0 - 400	0.2	62	K Farm Calf Barns
<b>Sub-total</b>	<b>795</b>			<b>546</b>	
<b>Longfellow Farm</b>					
Calves	642	0 - 400	0.2	128	Longfellow Farm Freestall Barn
Heifers	714	400 - 800	0.6	428	Longfellow Farm Freestall Barn
Heifers	1,000	800 - 1,200	1.1	1,100	Longfellow Farm Freestall Barn
<b>Sub-total</b>	<b>2,356</b>			<b>1,657</b>	
<b>TOTAL</b>	<b>8,915</b>			<b>8,649</b>	

## Notes:

- (1) Animal equivalency factor based on WDNR NR 243  
 (2) AU - Animal units, calculated in accordance with WDNR NR 243

Table 3

**Current Manure and Wastewater Quantity Summary**  
**FOIA Enterprises, LLC**  
**Algoma, Wisconsin**

Livestock Type	Numbers	Average Weight (lb)	Liquid <sup>(1)</sup> (gal/d)	Liquid <sup>(2)</sup> (gal/year)	Solids Separation <sup>(3)</sup> (gal/year)	Solids Separation <sup>(4)</sup> (tons/year)	Total Liquid to Storage (gal/year)	Solid (lb/d)	Solid (tons/yr)
<b>Main Facility</b>									
Milking Cows	3,800	1,300	26	35,368,500	3,183,165	13,051	32,185,335	--	--
Dry Cows	550	1,400	20	3,914,625	352,316	1,444	3,562,309	--	--
Heifers	75	800 - 1,200	16	424,313	38,188	157	386,124	--	--
Heifers	13	400 - 800	--	--	--	--	--	21	50
Calves	1,326	0 - 400	--	--	--	--	--	13	3,146
<b>Sub-total</b>	<b>5,764</b>			<b>39,707,438</b>	<b>3,573,669</b>	<b>14,652</b>	<b>36,133,768</b>		<b>3,196</b>
<b>K Farm</b>									
Beef Cattle	484	400 - Market	--	--	--	--	--	92	8,126
Calves	311	0 - 400	--	--	--	--	--	13	738
<b>Sub-total</b>	<b>795</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>8,864</b>
<b>Longfellow Farm</b>									
Calves	642	0 - 400	--	--	--	--	--	13	1,523
Heifers	714	400 - 800	13	3,257,625	--	--	3,257,625	--	0
Heifers	1,000	800 - 1200	16	5,657,500	--	--	5,657,500	--	0
<b>Sub-total</b>	<b>2,356</b>			<b>8,915,125</b>	<b>0</b>	<b>0</b>	<b>8,915,125</b>		<b>1,523</b>
<b>Total</b>	<b>8,915</b>			<b>48,622,563</b>	<b>3,573,669</b>	<b>14,652</b>	<b>45,048,893</b>		<b>13,583</b>
Silage Leachate <sup>(5)</sup> Main Dairy Old Feed Storage							<b>74,800</b>		
Runoff from Feed Storage Area <sup>(6)</sup> Main Dairy Old Feed Storage							<b>818,297</b>		
Silage Leachate <sup>(7)</sup> Longfellow Farm							<b>108,460</b>		
Runoff from Feed Storage Area and Concrete Barnyards <sup>(8)</sup> Longfellow Farm							<b>3,110,643</b>		
Silage Leachate <sup>(9)</sup> Main Dairy Feed Pad							<b>299,200</b>		
Runoff from Feed Pad <sup>(10)</sup> Main Dairy							<b>5,319,898</b>		
Runoff from Concrete Barnyards <sup>(11)</sup> K Farm							<b>1,863,270</b>		
Precipitation minus Evaporation <sup>(12)</sup> Manure and Leachate Storage Structures							<b>5,455,855</b>		
<b>Total Silage Leachate, Precipitation Runoff and Precipitation Less Evaporation =</b>							<b>17,050,422</b>		
<b>Total Annual Liquid Collection =</b>							<b>62,099,315</b>		
<b>Useable Waste Storage Capacity =</b>							<b>30,593,775</b>		
<b>Total Manure Solids (tons) =</b>							<b>28,235</b>		
<b>Days of Storage =</b>							<b>180</b>		

## Notes:

- (1) Liquid Manure Estimate based on farm production records.
- (2) Bedding and other by-products not included.
- (3) Solids separation is calculated based on a manure solids content of 12% and separation efficiency of 75%.
- (4) One gallon of separated solids equals 0.0041 tons.
- (5) Leachate volume based on 0.5 cubic feet per ton of stored feed for 20,000 tons of feed.
- (6) Based on Wisconsin USDA-NRCS Feed Storage Runoff Spreadsheet and CPS 629. Values derived from collection of 0.20 inches of first flush precipitation runoff and annual rainfall data from Kewaunee County.
- (7) Leachate volume based on 0.5 cubic feet per ton of stored feed for 29,000 tons of feed.
- (8) Based on Wisconsin USDA-NRCS Feed Storage Runoff Spreadsheet and CPS 629. Values derived from 100% collection of precipitation runoff from the feed storage area, concrete barnyards and roof drainage from adjacent barns.
- (9) Leachate volume based on 0.5 cubic feet per ton of stored feed for 80,000 tons of feed.
- (10) Based on annual average statewide rainfall, a runoff curve of 98 and 5.99 acres of feed storage area.
- (11) Based on direct precipitation on the concrete barnyard surface areas using State-wide rainfall data.
- (12) Based on direct precipitation less evaporation on manure storage pond surface areas using State-wide rainfall data.



Table 4

Proposed Herd Summary  
**FOIA** Enterprises, LLC  
 Algoma, Wisconsin

Livestock Type	Numbers	Average Weight (lb)	Animal Equivalency Factor <sup>(1)</sup>	AU <sup>(2)</sup>	Location and Housing Type
<b>Main Facility</b>					
Milking Cows	4,400	1,300	1.4	6,160	Main Dairy Freestall Barns
Dry Cows	600	1,400	1.4	840	Main Dairy Freestall Barns
Heifers	100	800 - 1200	1.1	110	Main Dairy Freestall Barns
Calves	1,200	0 - 400	0.2	240	Main Dairy Calf Barns
<b>Sub-total</b>	<b>6,300</b>			<b>7,350</b>	
<b>K Farm</b>					
Beef Cattle	1,300	400 - Mkt	1	1,300	K Farm Barnyard and Outdoor Lot
Calves	700	0 - 400	0.2	140	K Farm Calf Barns
<b>Sub-total</b>	<b>2,000</b>			<b>1,440</b>	
<b>Longfellow Farm</b>					
Calves	300	0 - 400	0.2	60	Longfellow Farm Freestall Barns
Heifers	1,100	400 - 800	0.6	660	Longfellow Farm Freestall Barns
Heifers	1,000	800 - 1200	1.1	1,100	Longfellow Farm Freestall Barns
<b>Sub-total</b>	<b>2,400</b>			<b>1,820</b>	
<b>TOTAL</b>	<b>10,700</b>			<b>10,610</b>	

## Notes:

- (1) Animal equivalency factor based on WDNR NR 243  
 (2) AU - Animal units, calculated in accordance with WDNR NR 243

Table 5

## Proposed Manure and Wastewater Quantity Summary

FOIA Enterprises, LLC  
Algoma, Wisconsin

Livestock Type/Numbers	Average Weight (lb)	Liquid <sup>(1)</sup> (gal/d)	Liquid <sup>(2)</sup> (gal/year)	Solids Separation <sup>(3)</sup> (gal/year)	Solids Separation <sup>(4)</sup> (tons/year)	Total Liquid to Storage (gal/year)	Solid (lb/d)	Solid (tons/yr)
<b>Main Facility</b>								
Milking Cows	4,400	1,300	26	40,953,000	3,685,770	15,112	37,267,230	—
Dry Cows	600	1,400	20	4,270,500	384,345	1,576	3,886,155	—
Heifers	100	800 - 1,200	16	565,750	50,918	209	514,833	—
Calves	1,200	0 - 400	—	—	—	—	—	13
Sub-total =	6,300			45,789,250	4,121,033	16,896	41,668,218	2,847
<b>K Farm</b>								
Beef Cattle	1,300	400-Mkt	—	—	—	—	—	92
Calves	700	0 - 400	—	—	—	—	—	13
Sub-total =	2,000			0	0	0	0	23,488
<b>Longfellow Farm</b>								
Calves	300	0 - 400	—	—	—	—	—	13
Heifers	1,100	400 - 800	13	5,219,500	0	0	5,219,500	—
Heifers	1,000	800 - 1200	16	5,657,500	0	0	5,657,500	—
Sub-total =	2,400			10,877,000	0	0	10,877,000	712
<b>Total =</b>	<b>10,700</b>			<b>56,666,250</b>	<b>4,121,033</b>	<b>16,896</b>	<b>52,545,218</b>	<b>27,047</b>
Precipitation minus Evaporation <sup>(5)</sup> Manure Storage Structures							5,332,873	
Silage Leachate <sup>(6)</sup> Main Dairy Old Feed Storage							74,800	
Runoff from Feed Storage Area <sup>(7)</sup> Main Dairy Old Feed Storage							818,297	
Portion of Runoff & Silage Leachate from Feed Storage Area and Concrete Bamyards <sup>(8)</sup> Longfellow Farm							78,850	
Runoff from Concrete Bamyards <sup>(9)</sup> K Farm							1,863,270	
<b>Total Wastewater to be Comingled with Manure =</b>							<b>8,168,089</b>	
<b>Total Manure and Wastewater Volume =</b>							<b>60,713,307</b>	
<b>Useable Manure Storage Capacity =</b>							<b>30,325,461</b>	
<b>Total Manure Solids (tons) =</b>							<b>43,943</b>	
<b>Days of Storage =</b>							<b>182</b>	
Silage Leachate <sup>(10)</sup> Longfellow Farm							108,460	
Annual Runoff from Feed Storage Area and Concrete Bamyards <sup>(11)</sup> Longfellow Farm							2,640,569	
Silage Leachate <sup>(12)</sup> Main Dairy Feed Pad							407,660	
Runoff from Feed Pad <sup>(13)</sup> Main Dairy							7,269,618	
Precipitation minus Evaporation <sup>(14)</sup> Existing and Proposed Leachate Storage Structures							1,241,869	
<b>Total Leachate and Precipitation Volume =</b>							<b>11,668,176</b>	
<b>Useable Leachate Pond Storage Capacity =</b>							<b>4,620,264</b>	
<b>Days of Storage =</b>							<b>146</b>	

## Notes:

- (1) Liquid Manure Estimate based on farm production records.
- (2) Bedding and other by-products not included.
- (3) Solids separation is calculated based on a manure solids content of 12% and separation efficiency of 75%.
- (4) One gallon of separated solids equals 0.0041 tons.
- (5) Based on direct precipitation less evaporation on manure storage pond surface areas using State-wide rainfall data.
- (6) Leachate volume based on 0.5 cubic feet per ton of stored feed for 20,000 tons of feed.
- (7) Based on Wisconsin USDA-NRCS Feed Storage Runoff Spreadsheet and CPS 629. Values derived from collection of 0.20 inches of first flush precipitation runoff and annual rainfall data using State-wide precipitation data.
- (8) Leachate volume based on 0.5 cubic feet per ton of stored feed for 29,000 tons of feed.
- (9) Based on direct precipitation on the concrete bamyard surface areas using State-wide rainfall data.
- (10) Based on the portion of runoff collected during the 25-year, 24-hour design storm that is above usable capacity in the existing leachate pond.
- (11) Based on Wisconsin USDA-NRCS Feed Storage Runoff Spreadsheet and CPS 629. Values derived from 100% collection of precipitation runoff collected annually from the feed storage area and adjacent concrete bamyard.
- (12) Leachate volume based on 0.5 cubic feet per ton of stored feed for 80,000 tons of existing feed + 26,000 tons proposed feed.
- (13) Based on direct precipitation on 8.19 acres of feed storage area using State-wide rainfall data.
- (14) Based on direct precipitation less evaporation on leachate storage pond surface areas using State-wide rainfall data.



## **Appendices**

## **Appendix A**

### **Completed Form 3400-25**



## **Appendix A.1**

### **Main Facility**

State of Wisconsin  
Department of Natural Resources  
PO Box 7185, Madison, WI 53707-7185  
dnr.wi.gov

**Livestock/Poultry Operation  
WPDES Permit Application**  
Form 3400-025 (R 2/12) Page 1 of 3

**Notice:** Pursuant to ch. NR 243, Wis. Adm. Code and s. 283.53(3), Wis. Stats., this Wisconsin Pollutant Discharge Elimination System (WPDES) form is required by the Department of Natural Resources (DNR) to be submitted, along with Form 3400-025A and all other required application materials, by the owner or operator of a Concentrated Animal Feeding Operation (CAFO). The Department will not consider your application complete unless you complete and submit this application form. Penalties for failure to submit a completed application are established in ss. 283.89 and 283.91, Wis. Stats. [Section 283.91(4), Wis. Stats., provides that: Any person who knowingly makes any false statement, representation or certification in this application shall upon conviction be punished by a fine of not more than \$10,000 or by imprisonment for not more than 6 months or both.] Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's open records law [ss. 19.31-19.39, Wis. Stats.].

Form 3400-025 is being submitted for the purpose of the (check one):

- ☐ Preliminary application,  
☐ Final application, or  
☒ Reissuance application

This operation is (check the following that apply to your operation):

- ☐ a new facility to be constructed  
☐ an existing facility expanding (check all that apply):  
☐ increasing animal numbers, ☐ constructing, ☒ no planned changes  
☒ an existing permittee for reissuance (check all that apply):  
☒ increasing animal numbers, ☒ constructing, ☐ no planned changes

Read the attached instructions before filling out the contact information. Print or type the requested information, except for the signature.

**Section I: Contact Information**

**Legal Name for Permit Issuance & Operator Contact Information**

1. Legal name of the operation to which the permit will be issued or Legal Name of parent company (if different from name of operation)

FOIA Ex. 6  
Enterprises, LLC

2. Name of Operator or Manager  
Ex. 6 (Personal Privacy)

Title  
Member

FOIA Ex. 6  
City/Town  
Algoma

State  
WI

ZIP Code  
54201

4. Phone Number (inc. area code)  
920-487-9932

Cell Phone  
Ex. 6 (Personal Privacy)

Fax Number  
920-487-3717

E-mail Address  
Ex. 6 (Personal Privacy)

**Parent Company Owner Information (if applicable)**

1. Name of Parent Company/Owner (if different from operator above)

2. Contact Person

Title

3. Mailing Address-Street, Route or Box

City/Town

State

ZIP Code

4. Phone Number (inc. area code)

Cell Phone

Fax Number

E-mail Address

**Crop Consultant**

1. Name of Crop Consultant  
Ex. 6 (Personal Privacy)

Company/Title  
AgSource Cooperative Services

2. Mailing Address-Street, Route or Box  
FOIA Ex. 6 (Personal Privacy)

City/Town  
Bonduel

State  
WI

ZIP Code  
54107

3. Phone Number (inc. area code)  
715-758-2178

Cell Phone  
Ex. 6 (Personal Privacy)

Fax Number  
715-758-2620

E-mail Address  
Ex. 6 (Personal Privacy)

**Design Engineer**

1. Name of Design Engineer  
Ex. 6 (Personal Privacy)

Company/Title  
GHD Services, Inc.

2. Mailing Address-Street, Route or Box  
1400 Lombardi Avenue, Ste 105

City/Town  
Green Bay

State  
WI

ZIP Code  
54304

3. Phone Number (inc. area code)  
920-490-1663

Cell Phone  
Ex. 6 (Personal Privacy)

Fax Number  
920-490-1668

E-mail Address  
Ex. 6 (Personal Privacy)

**Certification & Signature (person attesting to the accuracy and completeness of WPDES application)**

I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief such information is true, complete and accurate. This application must be signed by an individual who is either an owner of the operation identified above or a corporate officer if the operation is incorporated.

Printed or Typed Name of Official Representative

Ex. 6 (Personal Privacy)

Title  
Member

Signature of Official Representative

Date Signed

6/28/0



**Section II: Site Information (Must be completed for each site. Prior to completing, make copies as needed.)**

This operation uses this site for (check all that apply):

- ☒ Animal housing  
☒ Manure storage  
☒ Feed storage

The following item(s) are attached to this Site Description (check all that apply):

- ☒ Current AU worksheet  
☒ Projected AU worksheet  
☒ Site Map

**INSTRUCTIONS:** Read the attached instructions before entering the site description information. A separate Site Information section must be filled out for the main site and any other site(s) which are owned or operated by your farm for the purpose of housing animals, storing manure, or storing feed associated with your operation. Remember a site map and Current/Projected AU Calculation Worksheet(s) must also be included with each Site Information section.

**Name & Physical Location of Operation**

1. Name of Farm/Operation

FOIA Ex. 6 Enterprises - Main Facility

2. Location Address

FOIA Ex. 6 (Personal Privacy)  
Personal

City

Algoma

State

WI

ZIP Code

54201

3. County

Kewaunee

☐ City

☒ Town

☐ Village of

Pierce

Township

24 N

Range

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Section

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**Current/Projected Animal Units & Expansion Dates**

1. Use the Current AU Calculations Worksheet (Form 3400-025A) to calculate the total number of animal units presently held in confinement or feeding facilities for more than 45 days in a 12 month period at this site. Attach the corresponding Current AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no animals housed at this site for more than 45 days in a 12 month period.

2. Use the Projected AU Calculations Worksheet (Form 3400-025A) to determine the proposed number of animal units that will be held in confinement or feeding facilities for more than 45 days in a 12 month period at this site within the next five years. Attach the corresponding Projected AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no proposed increases in animal numbers at this site within the next five years.

3. List the date of proposed expansion(s) (i.e. increase in animals, constructing new structures, modifying existing structures) at this site within the next five years (MM/YY). These dates should correlate with the information provided for the proposed structures and systems listed in the tables below and the projected animal numbers provided on the Projected AU Calculations Worksheet:

Expansion 1: 08/2018

Expansion 2: \_\_\_\_\_

Expansion 3: \_\_\_\_\_

Expansion 4: \_\_\_\_\_

Expansion 5: \_\_\_\_\_

☐ Check here if no expansion is planned at this site within the next 5 years.

☒ Check here if your expansion(s) will disturb one (1) acre or more of soil.

**Types of Manure Storage/Composting Facilities/Wastewater Storage/Treatment Facilities**

List all existing and proposed manure storage, composting facilities, process wastewater storage, and treatment facilities located at this site. These may include earthen, earthen with a concrete floor, synthetically lined, concrete, steel above ground tank, below ground storage tank, anaerobic lagoon, roofed storage shed, under-floor storage, stacking slab (clay or concrete), unconfined manure stack, etc. Identify the type of waste(s) (e.g. solid manure, liquid manure, feed storage runoff or lot runoff, process wastewater, septic waste, digester, etc.) that is stored and the date the storage was built or the proposed date of construction. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the structure. If no documentation exists, indicate none in the space provided. All the existing and proposed structures must be identified on the site map associated with this description.

	Existing or Proposed?	Storage Type	Types of Waste	Year Built	Storage Facility Design Documentation
Waste Containing Facility 1	Existing	WSP #1 - 1,544,380 gal usable	liquid manure, WW	2002	Post Construction Report by Kewaunee Co LWCD
Waste Containing Facility 2	Existing	WSP #2 - 5,692,377 gal usable	liquid manure, WW	2006	Post Construction Report by Kewaunee Co LWCD
Waste Containing Facility 3	Existing	WSP #3 - 8,534,645 gal usable	liquid manure, WW	2011	Post Construction Report by CRA
Waste Containing Facility 4	Proposed	Leachate Management Pond	silage leachate/precipitation runoff		Plans & Specs by GHD
Waste Containing Facility 5					
Waste Containing Facility 6					
Waste Containing Facility 7					



### Types of Outside Animal Lots/Confinement Areas

List all **existing** and **proposed** outside animal lots/confinement areas located at this site. These may include outdoor barn yard or feedlot, housed under roof or partially housed under roof, or outdoor vegetated area. This does not need to include total confinement barns. Identify the number, type and size of animals (e.g. 50/heifers/800lbs) and whether or not there is a runoff control system associated with the lot. Types of runoff control systems may include vegetated treatment area, collection tank, roof, etc. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate **none** in the space provided. All the existing and proposed outside animal lots and confinement areas must be identified on the site map associated with this description.

	Existing or Proposed?	Outdoor Lot/Confinement Area Type	Number/Type/Size of Animals	Runoff Control Y/N	Confinement Area Design Documentation
Confinement Area 1	NA				
Confinement Area 2					
Confinement Area 3					
Confinement Area 4					
Confinement Area 5					

### Types of Feed Storage Areas

List all **existing** and **proposed** feed storage areas located at this site. These may include upright silos, earthen/concrete bunkers, etc. Identify the type and amount of feed stored (e.g. corn silage/100 tons). Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate **none** in the space provided. All the existing and proposed feed storage areas must be identified on the site map associated with this description. Check the box if bags are used for feed storage.

☐ Check here if bags are used for feed storage.

	Existing or Proposed?	Feed Storage Area Type	Type & Amount of Feed Stored	Runoff Control Y/N	Feed Storage Area Design Documentation
Feed Storage Area 1	Existing	Old Feed Pad- 165,964 ft2 concrete feed pad	20,000 tons	Y	Post Construction Report by CRA 02/2011
Feed Storage Area 2	Existing	New Feed Pad- 260,917 ft2 concrete feed pad	100,000 tons	Y	Post construction by GHD 10/2014
Feed Storage Area 3	Proposed	95,625 ft2 concrete feed pad	26,000 tons	Y	Plans & Specs by GHD
Feed Storage Area 4					
Feed Storage Area 5					

### Types of Runoff Control Systems

List all **existing** and **proposed** runoff control systems located at this site. These may include vegetated treatment area, collection tank, roof, etc. Identify the associated outdoor lot, confinement area, or feed storage. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the system. If no documentation exists, indicate **none** in the space provided. All the existing and proposed runoff control systems must be identified on the site map associated with this description.

	Existing or Proposed?	Type of Runoff Control System	Associated Outdoor Lot/Feed Storage	Runoff Control System Design Documentation
Runoff Control System 1	Existing	Collection Tank/VTA	Old Feed Pad	Post Construction by CRA- 02/2011
Runoff Control System 2	Existing	Leachate Management Pond	New Feed Pad+Expansion	Plans & Specs by GHD
Runoff Control System 3				
Runoff Control System 4				
Runoff Control System 5				



## **Appendix A.2**

### **K Farm**

**Section II: Site Information** (Must be completed for each site. Prior to completing, make copies as needed.)

This operation uses this site for (check all that apply):

- ☒ Animal housing  
☒ Manure storage  
☐ Feed storage

The following item(s) are attached to this Site Description (check all that apply):

- ☒ Current AU worksheet  
☒ Projected AU worksheet  
☒ Site Map

**INSTRUCTIONS:** Read the attached instructions before entering the site description information. A separate Site Information section must be filled out for the main site and any other site(s) which are owned or operated by your farm for the purpose of housing animals, storing manure, or storing feed associated with your operation. Remember a site map and Current/Projected AU Calculation Worksheet(s) must also be included with each Site Information section.

**Name & Physical Location of Operation**

1. Name of Farm/Operation

FOIA Ex. 6 Enterprises, LLC - K Farm

2. Location Address

FOIA Ex. 6 (Personal Privacy)

City

Algoma

State

WI

ZIP Code

54201

3. County

Kewaunee

☐ City

☒ Town

☐ Village of

Pierce

Township

24 N

Range

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**Current/Projected Animal Units & Expansion Dates**

1. Use the Current AU Calculations Worksheet (Form 3400-025A) to calculate the total number of animal units presently held in confinement or feeding facilities for more than 45 days in a 12 month period at this site. Attach the corresponding Current AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no animals housed at this site for more than 45 days in a 12 month period.

2. Use the Projected AU Calculations Worksheet (Form 3400-025A) to determine the proposed number of animal units that will be held in confinement or feeding facilities for more than 45 days in a 12 month period at this site within the next five years. Attach the corresponding Projected AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no proposed increases in animal numbers at this site within the next five years.

3. List the date of proposed expansion(s) (i.e. increase in animals, constructing new structures, modifying existing structures) at this site within the next five years (MM/YY). These dates should correlate with the information provided for the proposed structures and systems listed in the tables below and the projected animal numbers provided on the Projected AU Calculations Worksheet.

Expansion 1: \_\_\_\_\_ Expansion 2: \_\_\_\_\_ Expansion 3: \_\_\_\_\_ Expansion 4: \_\_\_\_\_ Expansion 5: \_\_\_\_\_

☐ Check here if no expansion is planned at this site within the next 5 years.

☐ Check here if your expansion(s) will disturb one (1) acre or more of soil.

**Types of Manure Storage/Composting Facilities/Wastewater Storage/Treatment Facilities**

List all existing and proposed manure storage, composting facilities, process wastewater storage, and treatment facilities located at this site. These may include earthen, earthen with a concrete floor, synthetically lined, concrete, steel above ground tank, below ground storage tank, anaerobic lagoon, roofed storage shed, under-floor storage, stacking slab (clay or concrete), unconfined manure stack, etc. Identify the type of waste(s) (e.g. solid manure, liquid manure, feed storage runoff or lot runoff, process wastewater, septic waste, digester, etc.) that is stored and the date the storage was built or the proposed date of construction. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the structure. If no documentation exists, indicate none in the space provided. All the existing and proposed structures must be identified on the site map associated with this description.

	Existing or Proposed?	Storage Type	Types of Waste	Year Built	Storage Facility Design Documentation
Waste Containing Facility 1	Existing	Runoff Collection Pond- 1,085,871 gallons usable	Barnyard Runoff	2013	As-Built Report by GHD, 08/2013
Waste Containing Facility 2					
Waste Containing Facility 3					
Waste Containing Facility 4					
Waste Containing Facility 5					
Waste Containing Facility 6					
Waste Containing Facility 7					



### Types of Outside Animal Lots/Confinement Areas

List all **existing** and **proposed** outside animal lots/confinement areas located at this site. These may include outdoor barn yard or feedlot, housed under roof or partially housed under roof, or outdoor vegetated area. This does not need to include total confinement barns. Identify the number, type and size of animals (e.g. 50/heifers/800lbs) and whether or not there is a runoff control system associated with the lot. Types of runoff control systems may include vegetated treatment area, collection tank, roof, etc. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed outside animal lots and confinement areas must be identified on the site map associated with this description.

	Existing or Proposed?	Outdoor Lot/Confinement Area Type	Number/Type/Size of Animals	Runoff Control Y/N	Confinement Area Design Documentation
Confinement Area 1	Existing	Concrete Barnyard- 74,738 ft2	800 steers (700#-Market)	N	Engineering Evaluation by CRA- Oct 2010
Confinement Area 2					
Confinement Area 3					
Confinement Area 4					
Confinement Area 5					

### Types of Feed Storage Areas

List all **existing** and **proposed** feed storage areas located at this site. These may include upright silos, earthen/concrete bunkers, etc. Identify the type and amount of feed stored (e.g. corn silage/100 tons). Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed feed storage areas must be identified on the site map associated with this description. Check the box if bags are used for feed storage.

☐ Check here if bags are used for feed storage.

	Existing or Proposed?	Feed Storage Area Type	Type & Amount of Feed Stored	Runoff Control Y/N	Feed Storage Area Design Documentation
Feed Storage Area 1	N/A				
Feed Storage Area 2					
Feed Storage Area 3					
Feed Storage Area 4					
Feed Storage Area 5					

### Types of Runoff Control Systems

List all **existing** and **proposed** runoff control systems located at this site. These may include vegetated treatment area, collection tank, roof, etc. Identify the associated outdoor lot, confinement area, or feed storage. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the system. If no documentation exists, indicate none in the space provided. All the existing and proposed runoff control systems must be identified on the site map associated with this description.

	Existing or Proposed?	Type of Runoff Control System	Associated Outdoor Lot/Feed Storage	Runoff Control System Design Documentation
Runoff Control System 1	Existing	Runoff Collection Pond	Concrete Lot	Post Construction Report by GHD, 08/2013
Runoff Control System 2				
Runoff Control System 3				
Runoff Control System 4				
Runoff Control System 5				

## **Appendix A.3 Longfellow Farm**



**Section II: Site Information** (Must be completed for each site. Prior to completing, make copies as needed.)

This operation uses this site for (check all that apply):

- ☒ Animal housing  
☒ Manure storage  
☒ Feed storage

The following item(s) are attached to this Site Description (check all that apply):

- ☒ Current AU worksheet  
☒ Projected AU worksheet  
☒ Site Map

**INSTRUCTIONS:** Read the attached instructions before entering the site description information. A separate Site Information section must be filled out for the main site and any other site(s) which are owned or operated by your farm for the purpose of housing animals, storing manure, or storing feed associated with your operation. Remember a site map and Current/Projected AU Calculation Worksheet(s) must also be included with each Site Information section.

**Name & Physical Location of Operation**

1. Name of Farm/Operation

FOIA EX. 6 Enterprises, LLC - Longfellow Farm

2. Location Address

FOIA EX. 6 (Personal Privacy)

City

Algoma

State

WI

ZIP Code

54201

3. County

Kewaunee

☐ City

☒ Town

☐ Village of

Pierce

Township

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Range

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NW

**Current/Projected Animal Units & Expansion Dates**

1. Use the Current AU Calculations Worksheet (Form 3400-025A) to calculate the total number of animal units presently held in confinement or feeding facilities for more than 45 days in a 12 month period at this site. Attach the corresponding Current AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no animals housed at this site for more than 45 days in a 12 month period.

2. Use the Projected AU Calculations Worksheet (Form 3400-025A) to determine the proposed number of animal units that will be held in confinement or feeding facilities for more than 45 days in a 12 month period at this site within the next five years. Attach the corresponding Projected AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no proposed increases in animal numbers at this site within the next five years.

3. List the date of proposed expansion(s) (i.e. increase in animals, constructing new structures, modifying existing structures) at this site within the next five years (MM/YY). These dates should correlate with the information provided for the proposed structures and systems listed in the tables below and the projected animal numbers provided on the Projected AU Calculations Worksheet:

Expansion 1: \_\_\_\_\_ Expansion 2: \_\_\_\_\_ Expansion 3: \_\_\_\_\_ Expansion 4: \_\_\_\_\_ Expansion 5: \_\_\_\_\_

☐ Check here if no expansion is planned at this site within the next 5 years.

☐ Check here if your expansion(s) will disturb one (1) acre or more of soil.

**Types of Manure Storage/Composting Facilities/Wastewater Storage/Treatment Facilities**

List all existing and proposed manure storage, composting facilities, process wastewater storage, and treatment facilities located at this site. These may include earthen, earthen with a concrete floor, synthetically lined, concrete, steel above ground tank, below ground storage tank, anaerobic lagoon, roofed storage shed, under-floor storage, stacking slab (clay or concrete), unconfined manure stack, etc. Identify the type of waste(s) (e.g. solid manure, liquid manure, feed storage runoff or lot runoff, process wastewater, septic waste, digester, etc.) that is stored and the date the storage was built or the proposed date of construction. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the structure. If no documentation exists, indicate none in the space provided. All the existing and proposed structures must be identified on the site map associated with this description.

	Existing or Proposed?	Storage Type	Types of Waste	Year Built	Storage Facility Design Documentation
Waste Containing Facility 1	WSP #1	Clay Lined - 5.8 mil gal usable	Manure		As-built by Kewaunee County LWCD
Waste Containing Facility 2	WSP #2	Clay Lined- 5.1 mil gal usable	Manure	2007	Engineering Eval by Roach & Assoc - 2012
Waste Containing Facility 3					
Waste Containing Facility 4					
Waste Containing Facility 5					
Waste Containing Facility 6					
Waste Containing Facility 7					



### Types of Outside Animal Lots/Confinement Areas

List all **existing** and **proposed** outside animal lots/confinement areas located at this site. These may include outdoor barn yard or feedlot, housed under roof or partially housed under roof, or outdoor vegetated area. This does not need to include total confinement barns. Identify the number, type and size of animals (e.g. 50/heifers/800lbs) and whether or not there is a runoff control system associated with the lot. Types of runoff control systems may include vegetated treatment area, collection tank, roof, etc. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed outside animal lots and confinement areas must be identified on the site map associated with this description.

	Existing or Proposed?	Outdoor Lot/Confinement Area Type	Number/Type/Size of Animals	Runoff Control Y/N	Confinement Area Design Documentation
Confinement Area 1	Existing	West Concrete Barnyard - 8,430 ft2	none	N	Lot use to be abandoned
Confinement Area 2	Existing	East Exercise Lot - 4,117 ft2	none	N	Lot only used to hold animals during cleaning
Confinement Area 3					
Confinement Area 4					
Confinement Area 5					

### Types of Feed Storage Areas

List all **existing** and **proposed** feed storage areas located at this site. These may include upright silos, earthen/concrete bunkers, etc. Identify the type and amount of feed stored (e.g. corn silage/100 tons). Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed feed storage areas must be identified on the site map associated with this description. Check the box if bags are used for feed storage.

☐ Check here if bags are used for feed storage.

	Existing or Proposed?	Feed Storage Area Type	Type & Amount of Feed Stored	Runoff Control Y/N	Feed Storage Area Design Documentation
Feed Storage Area 1	Existing	Concrete Bunkers - 2.87 acres	29,000 tons of Corn Silage/Haylage	Y	As-built by Roach & Associates, 2018
Feed Storage Area 2					
Feed Storage Area 3					
Feed Storage Area 4					
Feed Storage Area 5					

### Types of Runoff Control Systems

List all **existing** and **proposed** runoff control systems located at this site. These may include vegetated treatment area, collection tank, roof, etc. Identify the associated outdoor lot, confinement area, or feed storage. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the system. If no documentation exists, indicate none in the space provided. All the existing and proposed runoff control systems must be identified on the site map associated with this description.

	Existing or Proposed?	Type of Runoff Control System	Associated Outdoor Lot/Feed Storage	Runoff Control System Design Documentation
Runoff Control System 1	Existing	Gravity drainage to leachate basin-100% collection	Feed Storage Area	As-built by Roach & Associates, 2018
Runoff Control System 2	Existing	Gravity drainage to leachate basin-100% collection	East Exercise Lot	As-Built by Roach & Associates, 2018
Runoff Control System 3				
Runoff Control System 4				
Runoff Control System 5				



## **Appendix A.4**

### **S Farm**

**Section II: Site Information** (Must be completed for each site. Prior to completing, make copies as needed.)

This operation uses this site for (check all that apply):

- ☒ Animal housing  
☒ Manure storage  
☒ Feed storage

The following item(s) are attached to this Site Description (check all that apply):

- ☒ Current AU worksheet  
☒ Projected AU worksheet  
☒ Site Map

**INSTRUCTIONS:** Read the attached instructions before entering the site description information. A separate Site Information section must be filled out for the main site and any other site(s) which are owned or operated by your farm for the purpose of housing animals, storing manure, or storing feed associated with your operation. Remember a site map and Current/Projected AU Calculation Worksheet(s) must also be included with each Site Information section.

**Name & Physical Location of Operation**

1. Name of Farm/Operation

FOIA EX. 5 Enterprises, LLC - S Farm

2. Location Address

FOIA EX. 6 (Personal Privacy)

City

Algoma

State

WI

ZIP Code

54201

3. County

Kewaunee

☐ City

☒ Town

☐ Village of

Pierce

Township

25 N

Range

25

☒ E

☐ W

Section

29

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1/4 1/4

NE

**Current/Projected Animal Units & Expansion Dates**

1. Use the Current AU Calculations Worksheet (Form 3400-025A) to calculate the total number of animal units presently held in confinement or feeding facilities for more than 45 days in a 12 month period at this site. Attach the corresponding Current AU Calculations Worksheet to this Site Description section.

☒ Check here if there are no animals housed at this site for more than 45 days in a 12 month period.

2. Use the Projected AU Calculations Worksheet (Form 3400-025A) to determine the proposed number of animal units that will be held in confinement or feeding facilities for more than 45 days in a 12 month period at this site within the next five years. Attach the corresponding Projected AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no proposed increases in animal numbers at this site within the next five years.

3. List the date of proposed expansion(s) (i.e. increase in animals, constructing new structures, modifying existing structures) at this site within the next five years (MM/YY). These dates should correlate with the information provided for the proposed structures and systems listed in the tables below and the projected animal numbers provided on the Projected AU Calculations Worksheet:

Expansion 1: \_\_\_\_\_ Expansion 2: \_\_\_\_\_ Expansion 3: \_\_\_\_\_ Expansion 4: \_\_\_\_\_ Expansion 5: \_\_\_\_\_

☒ Check here if no expansion is planned at this site within the next 5 years.

☐ Check here if your expansion(s) will disturb one (1) acre or more of soil.

**Types of Manure Storage/Composting Facilities/Wastewater Storage/Treatment Facilities**

List all existing and proposed manure storage, composting facilities, process wastewater storage, and treatment facilities located at this site. These may include earthen, earthen with a concrete floor, synthetically lined, concrete, steel above ground tank, below ground storage tank, anaerobic lagoon, roofed storage shed, under-floor storage, stacking slab (clay or concrete), unconfined manure stack, etc. Identify the type of waste(s) (e.g. solid manure, liquid manure, feed storage runoff or lot runoff, process wastewater, septic waste, digester, etc.) that is stored and the date the storage was built or the proposed date of construction. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the structure. If no documentation exists, indicate none in the space provided. All the existing and proposed structures must be identified on the site map associated with this description.

	Existing or Proposed?	Storage Type	Types of Waste	Year Built	Storage Facility Design Documentation
Waste Containing Facility 1	WSP #1	Clay Lined/Concrete Bottom 85 x 85 x 4.3 (118,182 gallons usable)	Manure	1981	Engineering Evaluation by GHD April 5, 2016
Waste Containing Facility 2	WSP #2	Clay Lined- 210 x 105 x 15 (1,215,478 gallons usable)	Manure	2004	Engineering Evaluation by GHD April 5, 2016
Waste Containing Facility 3					
Waste Containing Facility 4					
Waste Containing Facility 5					
Waste Containing Facility 6					
Waste Containing Facility 7					



**Types of Outside Animal Lots/Confinement Areas**

List all **existing** and **proposed** outside animal lots/confinement areas located at this site. These may include outdoor barn yard or feedlot, housed under roof or partially housed under roof, or outdoor vegetated area. This does not need to include total confinement barns. Identify the number, type and size of animals (e.g. 50/heifers/800lbs) and whether or not there is a runoff control system associated with the lot. Types of runoff control systems may include vegetated treatment area, collection tank, roof, etc. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed outside animal lots and confinement areas must be identified on the site map associated with this description.

	Existing or Proposed?	Outdoor Lot/Confinement Area Type	Number/Type/Size of Animals	Runoff Control Y/N	Confinement Area Design Documentation
Confinement Area 1	n/a				
Confinement Area 2					
Confinement Area 3					
Confinement Area 4					
Confinement Area 5					

**Types of Feed Storage Areas**

List all **existing** and **proposed** feed storage areas located at this site. These may include upright silos, earthen/concrete bunkers, etc. Identify the type and amount of feed stored (e.g. corn silage/100 tons). Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed feed storage areas must be identified on the site map associated with this description. Check the box if bags are used for feed storage.

☐ Check here if bags are used for feed storage.

	Existing or Proposed?	Feed Storage Area Type	Type & Amount of Feed Stored	Runoff Control Y/N	Feed Storage Area Design Documentation
Feed Storage Area 1	n/a				
Feed Storage Area 2					
Feed Storage Area 3					
Feed Storage Area 4					
Feed Storage Area 5					

**Types of Runoff Control Systems**

List all **existing** and **proposed** runoff control systems located at this site. These may include vegetated treatment area, collection tank, roof, etc. Identify the associated outdoor lot, confinement area, or feed storage. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the system. If no documentation exists, indicate none in the space provided. All the existing and proposed runoff control systems must be identified on the site map associated with this description.

	Existing or Proposed?	Type of Runoff Control System	Associated Outdoor Lot/Feed Storage	Runoff Control System Design Documentation
Runoff Control System 1	n/a			
Runoff Control System 2				
Runoff Control System 3				
Runoff Control System 4				
Runoff Control System 5				

## **Appendix A.5**

### **54 Farm**



**Section II: Site Information** (Must be completed for each site. Prior to completing, make copies as needed.)

This operation uses this site for (check all that apply):

- ☒ Animal housing  
☒ Manure storage  
☒ Feed storage

The following item(s) are attached to this Site Description (check all that apply):

- ☒ Current AU worksheet  
☒ Projected AU worksheet  
☒ Site Map

**INSTRUCTIONS:** Read the attached instructions before entering the site description information. A separate Site Information section must be filled out for the main site and any other site(s) which are owned or operated by your farm for the purpose of housing animals, storing manure, or storing feed associated with your operation. Remember a site map and Current/Projected AU Calculation Worksheet(s) must also be included with each Site Information section.

**Name & Physical Location of Operation**

1. Name of Farm/Operation

FOIA Ex. 6 Enterprises, LLC - 54 Farm

2. Location Address

FOIA Ex. 6 (Personal Privacy)

City

Algoma

State

WI

ZIP Code

54201

3. County

Kewaunee

☐ City

☒ Town

☐ Village of

Ahnapee

Township

25

Range

25

☒ E

☐ W

Section

31

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SE

¼ / ¼

SW

**Current/Projected Animal Units & Expansion Dates**

1. Use the Current AU Calculations Worksheet (Form 3400-025A) to calculate the total number of animal units presently held in confinement or feeding facilities for more than 45 days in a 12 month period at this site. Attach the corresponding Current AU Calculations Worksheet to this Site Description section.

☒ Check here if there are no animals housed at this site for more than 45 days in a 12 month period.

2. Use the Projected AU Calculations Worksheet (Form 3400-025A) to determine the proposed number of animal units that will be held in confinement or feeding facilities for more than 45 days in a 12 month period at this site within the next five years. Attach the corresponding Projected AU Calculations Worksheet to this Site Description section.

☐ Check here if there are no proposed increases in animal numbers at this site within the next five years.

3. List the date of proposed expansion(s) (i.e. increase in animals, constructing new structures, modifying existing structures) at this site within the next five years (MM/YY). These dates should correlate with the information provided for the proposed structures and systems listed in the tables below and the projected animal numbers provided on the Projected AU Calculations Worksheet:

Expansion 1: \_\_\_\_\_ Expansion 2: \_\_\_\_\_ Expansion 3: \_\_\_\_\_ Expansion 4: \_\_\_\_\_ Expansion 5: \_\_\_\_\_

☒ Check here if no expansion is planned at this site within the next 5 years.

☐ Check here if your expansion(s) will disturb one (1) acre or more of soil.

**Types of Manure Storage/Composting Facilities/Wastewater Storage/Treatment Facilities**

List all existing and proposed manure storage, composting facilities, process wastewater storage, and treatment facilities located at this site. These may include earthen, earthen with a concrete floor, synthetically lined, concrete, steel above ground tank, below ground storage tank, anaerobic lagoon, roofed storage shed, under-floor storage, stacking slab (clay or concrete), unconfined manure stack, etc. Identify the type of waste(s) (e.g. solid manure, liquid manure, feed storage runoff or lot runoff, process wastewater, septic waste, digester, etc.) that is stored and the date the storage was built or the proposed date of construction. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the structure. If no documentation exists, indicate none in the space provided. All the existing and proposed structures must be identified on the site map associated with this description.

	Existing or Proposed?	Storage Type	Types of Waste	Year Built	Storage Facility Design Documentation
Waste Containing Facility 1	WST	Slurrystore Tank-101 diameter by 20 ft (1,117,169 gallons usable)	Manure		Engineering Evaluation pending by Central States TankST.
Waste Containing Facility 2					
Waste Containing Facility 3					
Waste Containing Facility 4					
Waste Containing Facility 5					
Waste Containing Facility 6					
Waste Containing Facility 7					



### Types of Outside Animal Lots/Confinement Areas

List all **existing** and **proposed** outside animal lots/confinement areas located at this site. These may include outdoor barn yard or feedlot, housed under roof or partially housed under roof, or outdoor vegetated area. This does not need to include total confinement barns. Identify the number, type and size of animals (e.g. 50/heifers/800lbs) and whether or not there is a runoff control system associated with the lot. Types of runoff control systems may include vegetated treatment area, collection tank, roof, etc. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed outside animal lots and confinement areas must be identified on the site map associated with this description.

	Existing or Proposed?	Outdoor Lot/Confinement Area Type	Number/Type/Size of Animals	Runoff Control Y/N	Confinement Area Design Documentation
Confinement Area 1	n/a				
Confinement Area 2					
Confinement Area 3					
Confinement Area 4					
Confinement Area 5					

### Types of Feed Storage Areas

List all **existing** and **proposed** feed storage areas located at this site. These may include upright silos, earthen/concrete bunkers, etc. Identify the type and amount of feed stored (e.g. corn silage/100 tons). Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the area. If no documentation exists, indicate none in the space provided. All the existing and proposed feed storage areas must be identified on the site map associated with this description. Check the box if bags are used for feed storage.

☐ Check here if bags are used for feed storage.

	Existing or Proposed?	Feed Storage Area Type	Type & Amount of Feed Stored	Runoff Control Y/N	Feed Storage Area Design Documentation
Feed Storage Area 1	n/a				
Feed Storage Area 2					
Feed Storage Area 3					
Feed Storage Area 4					
Feed Storage Area 5					

### Types of Runoff Control Systems

List all **existing** and **proposed** runoff control systems located at this site. These may include vegetated treatment area, collection tank, roof, etc. Identify the associated outdoor lot, confinement area, or feed storage. Specify the type of design documentation such as plans and specifications, post construction documentation, and/or an engineering evaluation you may have of the system. If no documentation exists, indicate none in the space provided. All the existing and proposed runoff control systems must be identified on the site map associated with this description.

	Existing or Proposed?	Type of Runoff Control System	Associated Outdoor Lot/Feed Storage	Runoff Control System Design Documentation
Runoff Control System 1	n/a			
Runoff Control System 2				
Runoff Control System 3				
Runoff Control System 4				
Runoff Control System 5				



**Appendix B**  
**Completed Animal Unit Worksheets**  
**(Form 3400-025A)**

## **Appendix B.1 Main Facility**



State of Wisconsin  
Department of Natural Resources  
PO Box 7185 Madison WI 53707-7185

**Animal Unit Calculation Worksheet**  
**Form 3400-025A (R 3/2012)**

**Animal Unit Calculation Worksheet**  
**Form 3400-025A (R 3/2012)**

The Projected Animal Unit Calculation Worksheet must be filled out separately for the "main" site and each site which are owned or operated by your farm for the purposes of housing animals associated with your operation. The site name, for which you are filling this worksheet out, must be provided below and correlate with Form 3400-025 Site Information (Section II).

**Projected Animal Unit Calculation Numbers**

**Name of Site:** FOIA Ex. 6  
(Personal) **Enterprises, LLC - Main Facility**

Animal Type		I. Mixed Animal Units			II. Non-mixed Animal Units		
		b. Equiv. factor	c. Projected Number	d. No. of AUs	e. Equiv. factor	f. Projected Number	g. No. of AUs
<i>Example - Broilers (non-liquid manure):</i>		0.005 x	150,000	= 750	0.008 x	150,000	= 1200
Dairy/Beef Calves (under 400 lbs)		0.20 x	1200	= 240	<i>Fed numbers in this column comply with 40 CFR s. 122.23</i>		
Dairy Cattle	Milking & Dry Cows	1.40 x	5000	= 7000	1.43 x	5000	= 7150
	Heifers (800 lbs to 1200 lbs)	1.10 x	100	= 110			
	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x	100	= 100
Beef	Steers or Cows (400 lbs to market)	1.00 x		=			
	Other (specify)	1.40 x		=			



## **Appendix B.2**

### **K Farm**

State of Wisconsin  
Department of Natural Resources  
PO Box 7185, Madison, WI 53707-7185

**Animal Unit Calculation Worksheet**  
**Form 3400-025A (R 3/2012)**



The Projected Animal Unit Calculation Worksheet must be filled out separately for the "main" site and each site which are owned or operated by your farm for the purposes of housing animals associated with your operation. The site name, for which you are filling this worksheet out, must be provided below and correlate with Form 3400-025 Site Information (Section II).

**Projected Animal Unit Calculation Numbers**

Name of Site: FOIA Ex. 6  
(Personal  
Data) Enterprises, LLC - K Farm

Animal Type		I. Mixed Animal Units			II. Non-mixed Animal Units		
		b. Equiv. factor	c. Projected Number	d. No. of AUs	e. Equiv. factor	f. Projected Number	g. No. of AUs
Example - Broilers (non-liquid manure):		0.005 x	150,000	= 750	0.008 x	150,000	= 1200
Dairy/Beef Calves (under 400 lbs)		0.20 x	700	= 140	Fed numbers in this column comply with 40 CFR's 122.23		
Dairy Cattle	Milking & Dry Cows	1.40 x		=	1.43 x		=
	Heifers (800 lbs to 1200 lbs)	1.10 x		=			
	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x		=
Beef	Steers or Cows (400 lbs to market)	1.00 x	1300	= 1300			
	Wulls (each)	1.40 x		=	1.00 x	1200	= 1200

## **Appendix B.3 Longfellow Farm**



State of Wisconsin  
Department of Natural Resources  
PO Box 7185, Madison, WI 53707-7185

**Animal Unit Calculation Worksheet**  
**Form 3400-025A (R 3/2012)**

**Animal Unit Calculation Worksheet**  
**Form 3400-025A (R 3/2012)**

The Projected Animal Unit Calculation Worksheet must be filled out separately for the "main" site and each site which are owned or operated by your farm for the purposes of housing animals associated with your operation. The site name, for which you are filling this worksheet out, must be provided below and correlate with Form 3400-025 Site Information (Section II).

**Projected Animal Unit Calculation Numbers**

Name of Site: **Enterprises, LLC - Longfellow Farm**

Animal Type		I. Mixed Animal Units			II. Non-mixed Animal Units		
		b. Equiv. factor	c. Projected Number	d. No. of AUs	e. Equiv. factor	f. Projected Number	g. No. of AUs
Example - Broilers (non-liquid manure):		0.005 x	150,000	= 750	0.008 x	150,000	= 1200
Dairy/Beef Calves (under 400 lbs)		0.20 x	300	= 60	Fed numbers in this column comply with 40 CFR = 122.23		
Dairy Cattle	Milking & Dry Cows	1.40 x		=	1.43 x		=
	Heifers (800 lbs to 1200 lbs)	1.10 x	1000	= 1100			
	Heifers (400 lbs to 800 lbs)	0.60 x	1100	= 660	1.00 x	2100	= 2100
Beef	Steers or Cows (400 lbs to market)	1.00 x		=			
	Bulls (each)	1.40 x		=	1.00 x		=



## **Appendix C**

# **Waste Storage Sizing Calculations**



## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA EX. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 19, 2018  
Checked By: \_\_\_\_\_

### WEATHER DATA

Site Location: Algoma, Kewaunee County, WI  
Weather Station Location: Kewaunee - KEWAUNEE WI4195  
25 Year / 24 Hour Storm: 4.3 inches

	Precipitation	Evaporation	Precip. - Evap.
	(in)	(in)	(in)
January	1.09	0.02	1.07
February	1.02	0.02	1.00
March	1.79	0.07	1.72
April	2.93	0.63	2.30
May	3.53	1.69	1.84
June	4.21	2.48	1.73
July	4.02	2.76	1.26
August	4.01	2.36	1.65
September	3.73	1.57	2.16
October	2.82	0.67	2.15
November	2.16	0.08	2.08
December	1.40	0.02	1.38
Total (in)	32.71	12.37	20.34





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA EX. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

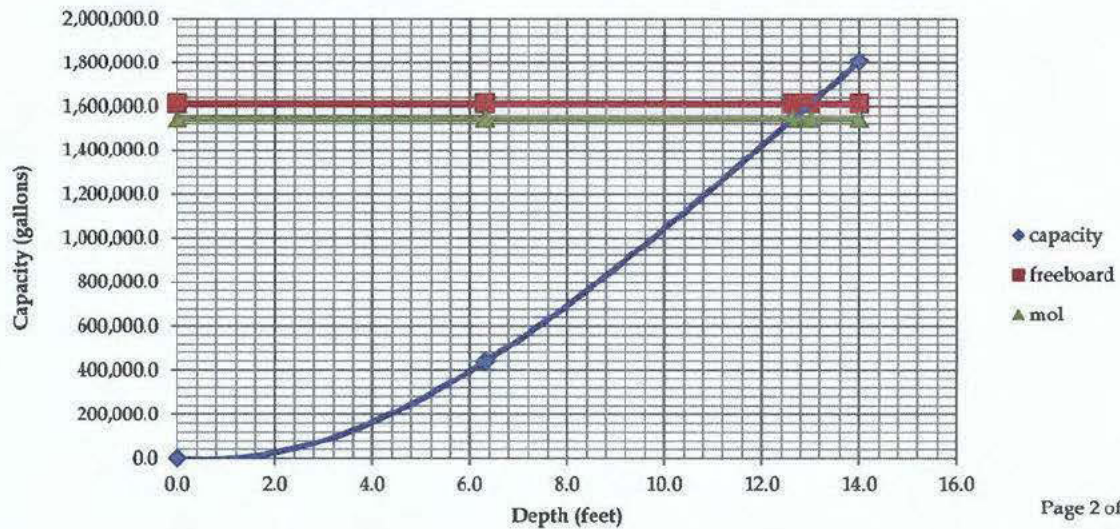
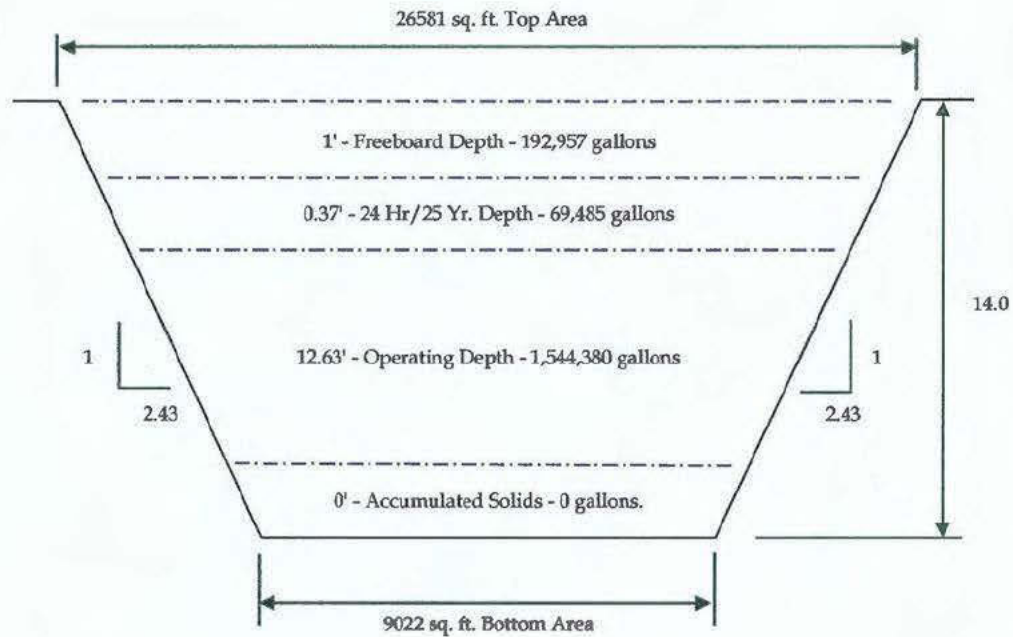
EXISTING STORAGE: WSP #1

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 1,806,821 gallons

DESIGN STORAGE VOLUME: 1,613,865 gallons

COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA EX. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

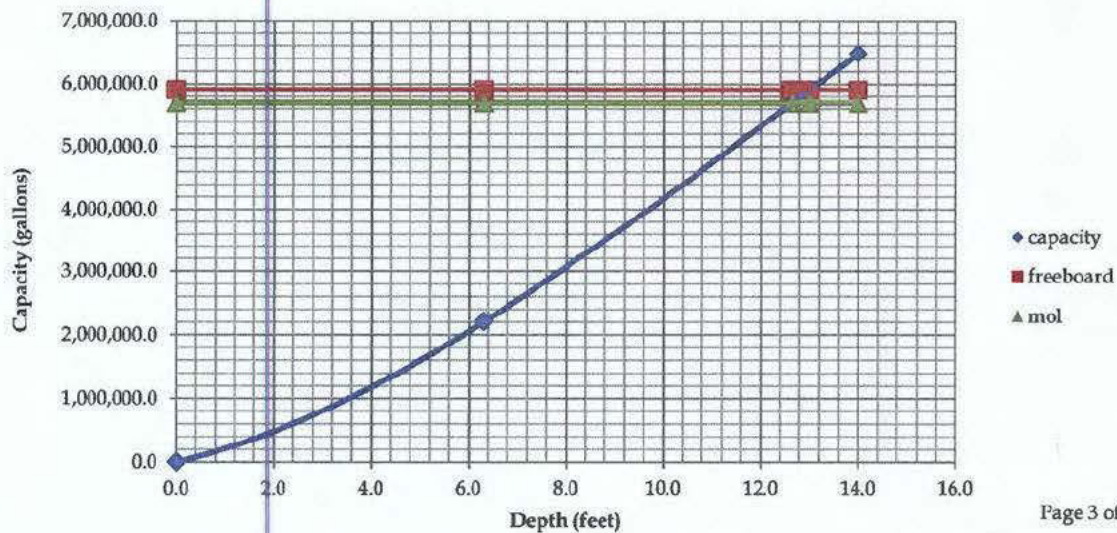
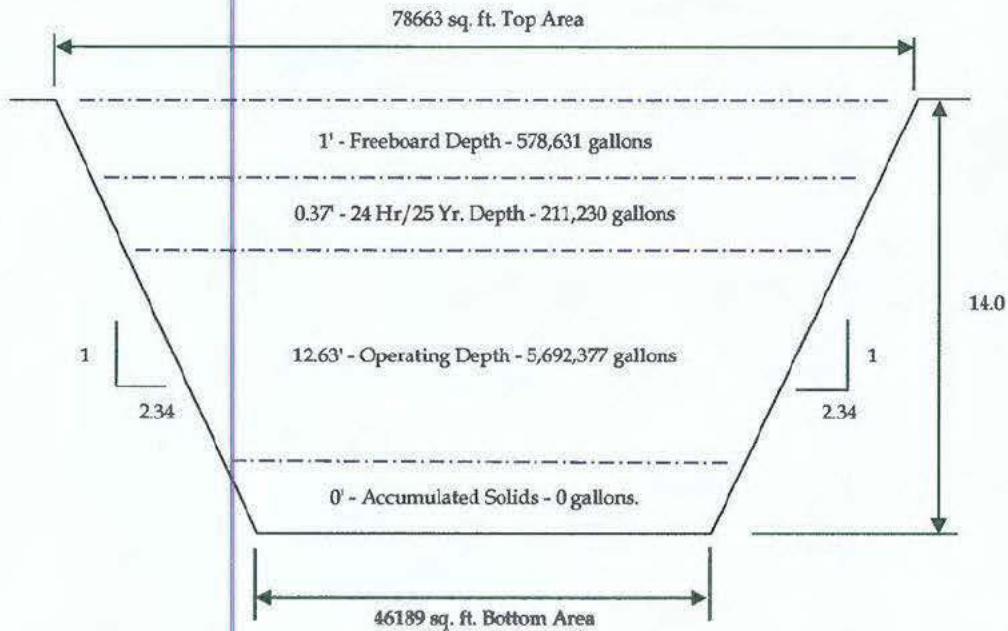
EXISTING STORAGE: WSP #2

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 6,482,238 gallons

DESIGN STORAGE VOLUME: 5,903,607 gallons

COVERED: No







## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA EX 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

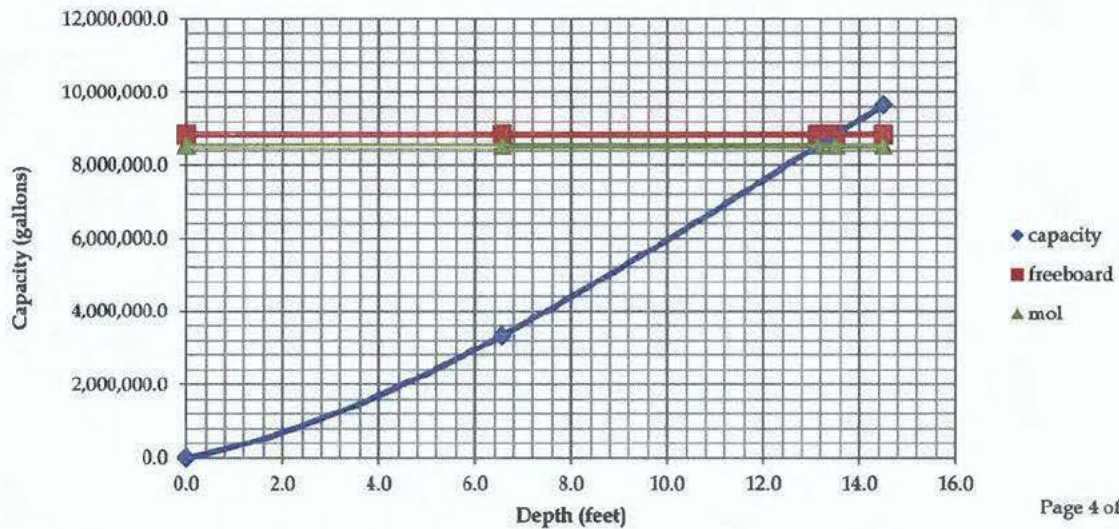
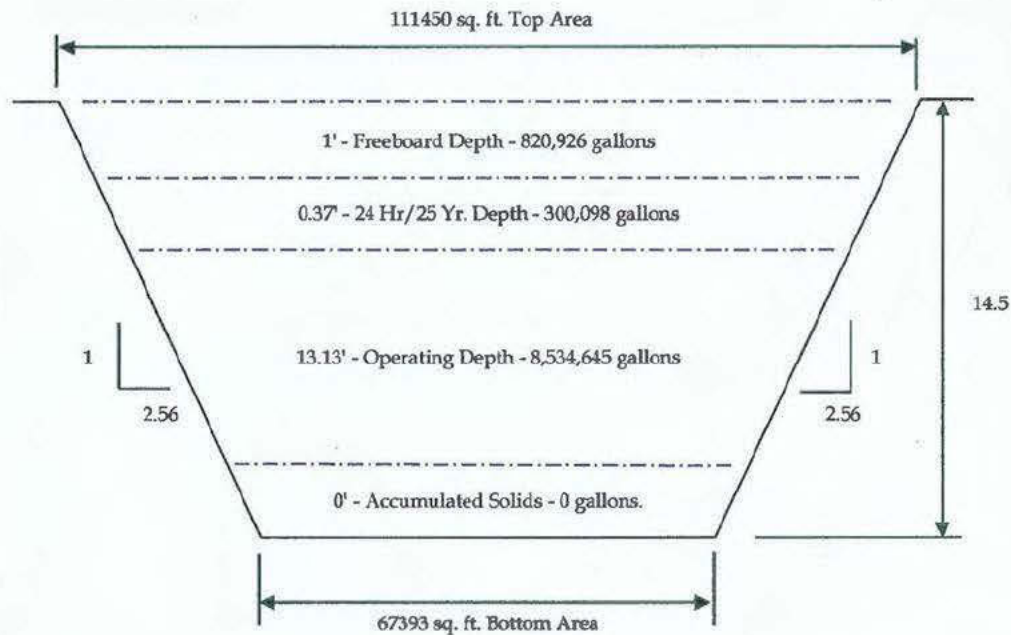
EXISTING STORAGE: WSP #3

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 9,655,670 gallons

DESIGN STORAGE VOLUME: 8,834,743 gallons

COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal)** (K FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

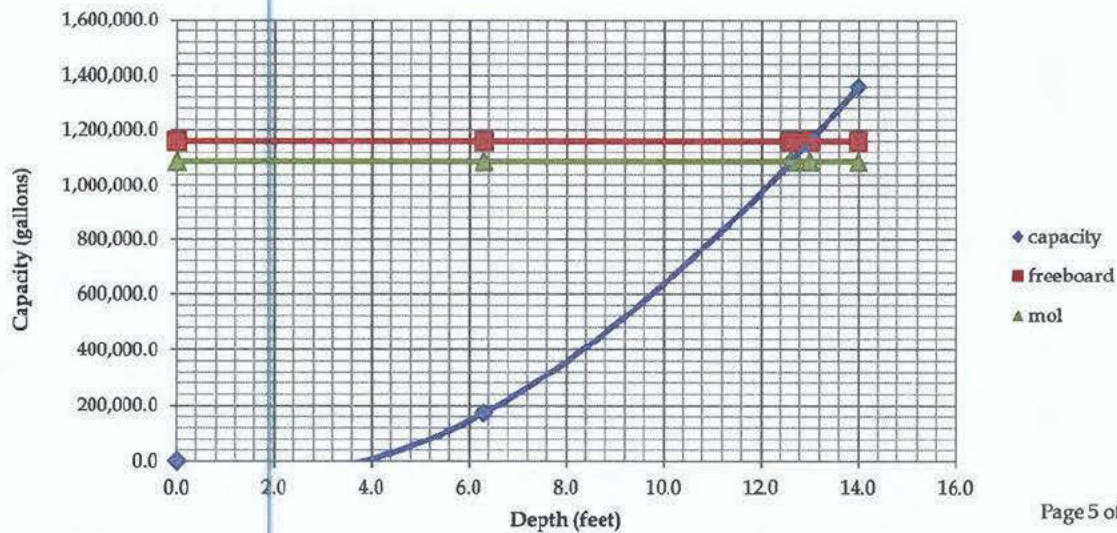
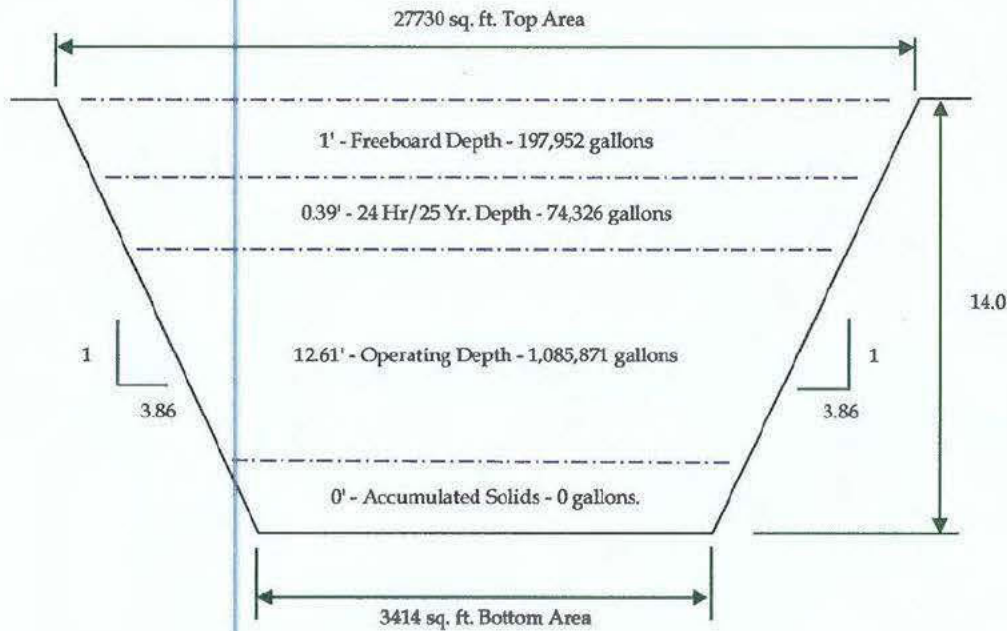
EXISTING STORAGE: Runoff Pond

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 1,358,149 gallons

DESIGN STORAGE VOLUME: 1,160,197 gallons

COVERED: No







## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex.** (LONGFELLOW)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

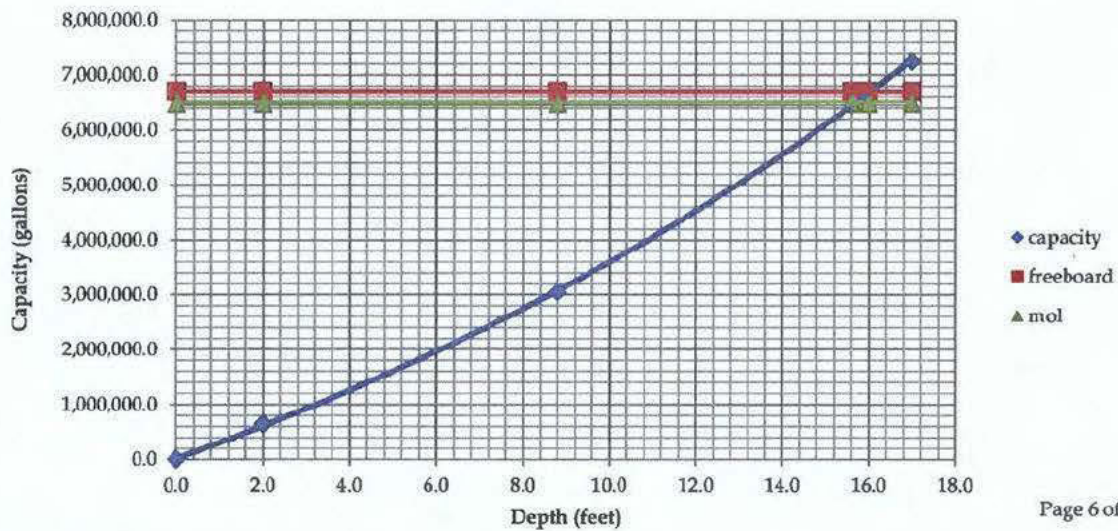
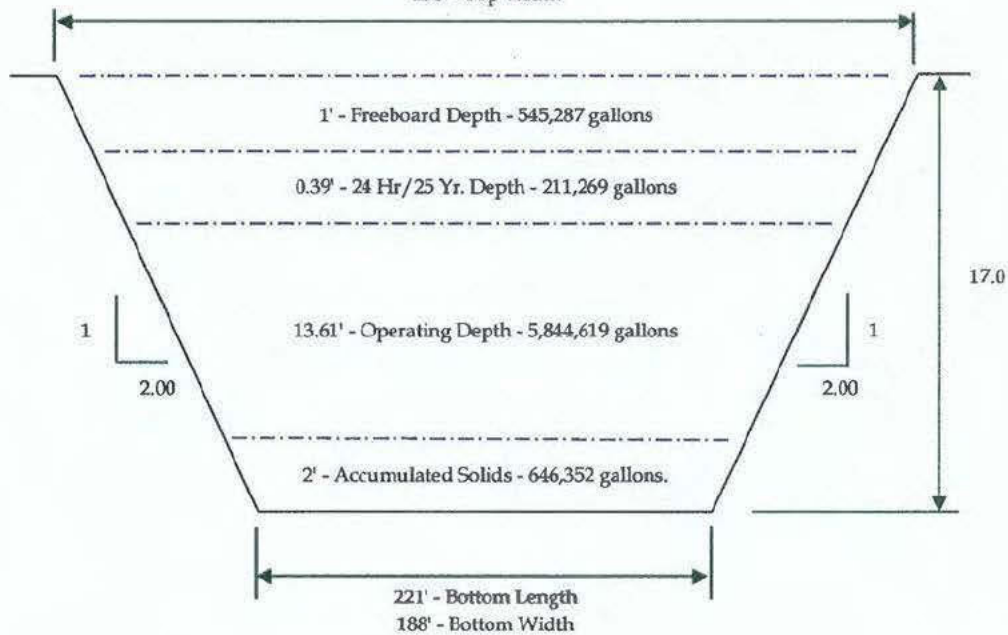
Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: WSP #1

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 7,247,527 gallons  
DESIGN STORAGE VOLUME: 6,055,888 gallons  
COVERED: No

289' - Top Length  
256' - Top Width





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal)** (LONGFELLOW)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: WSP #2

STORAGE TYPE: Rectangular Pond

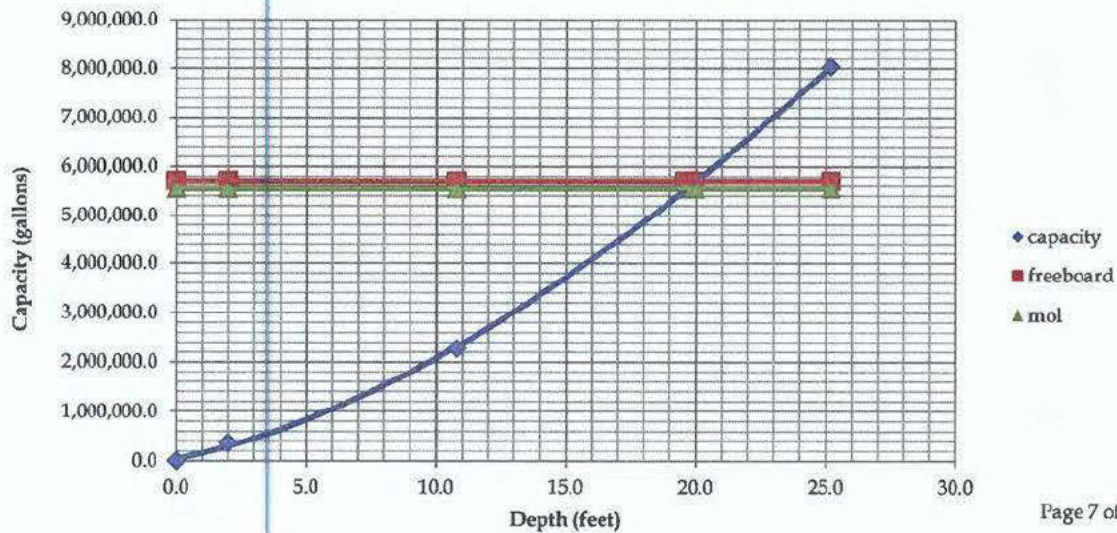
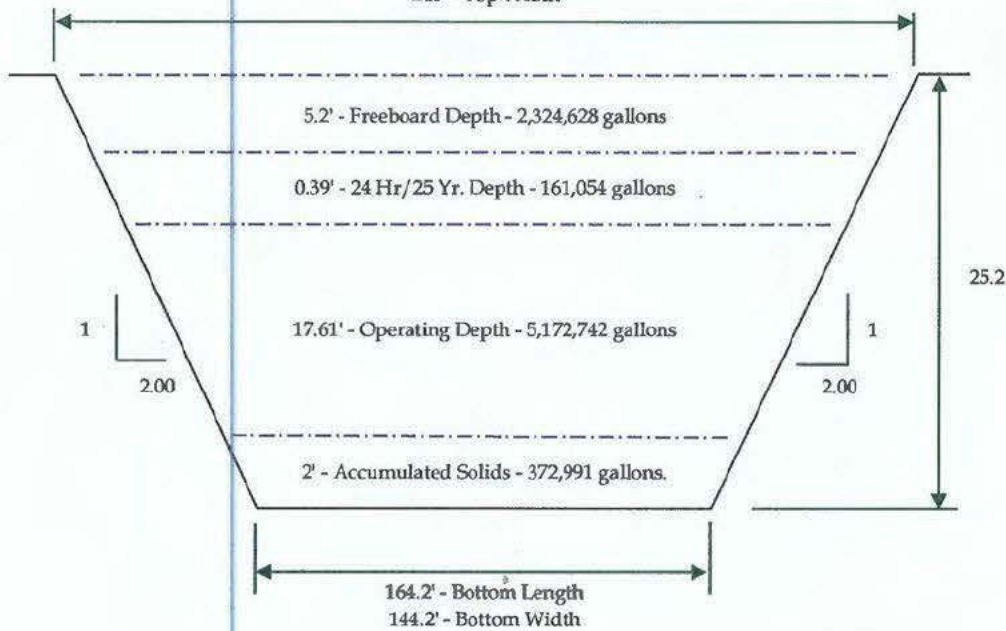
TOTAL CAPACITY: 8,031,415 gallons

DESIGN STORAGE VOLUME: 5,333,796 gallons

COVERED: No

265' - Top Length

245' - Top Width







## WASTE STORAGE FACILITY SIZING

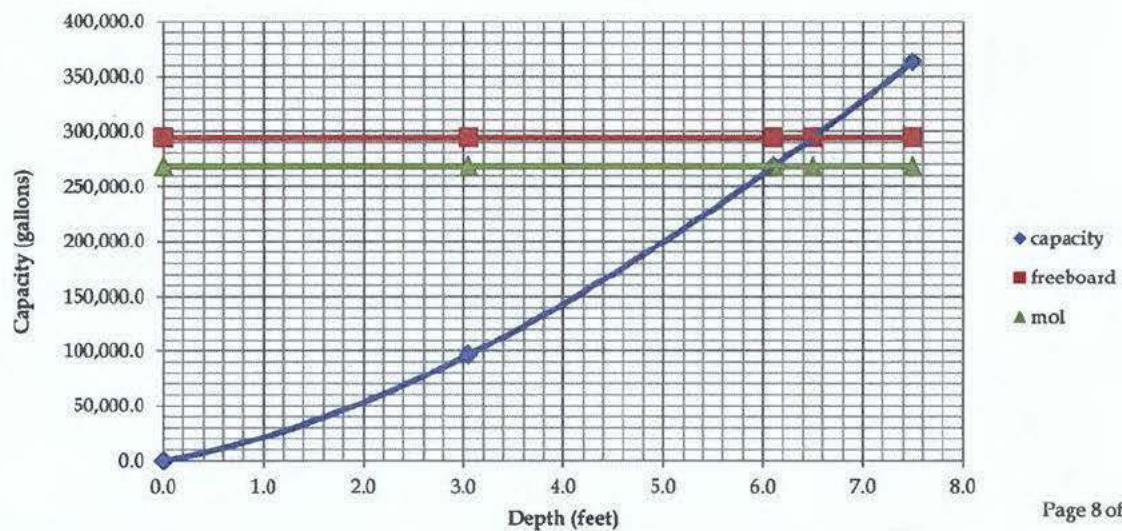
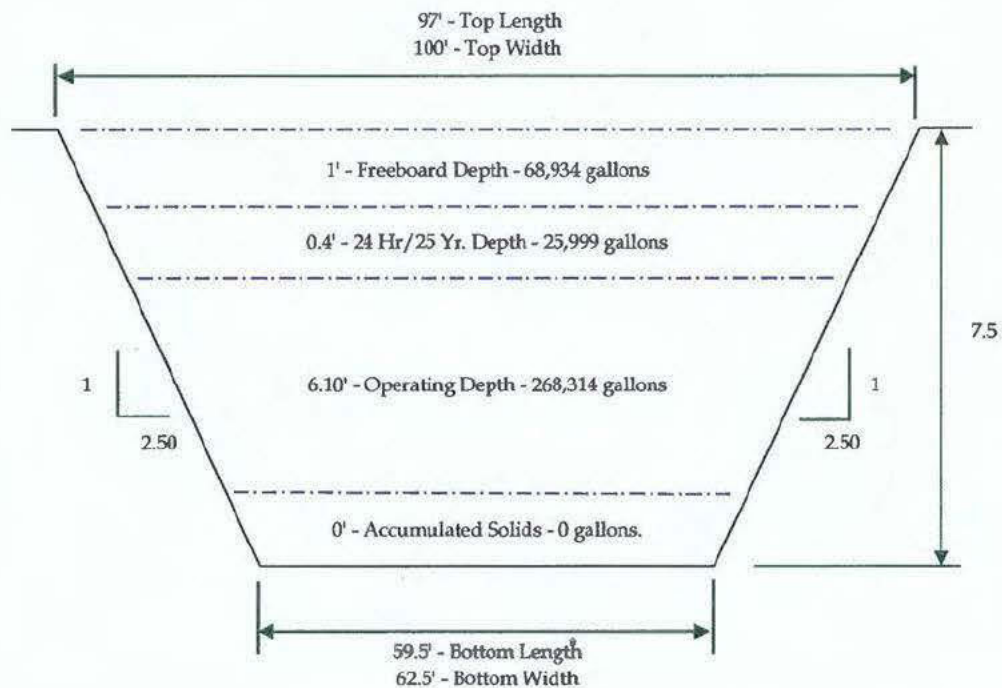
Project Name: **FOIA Ex. 6** (LONGFELLOW FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: Leachate Basin

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 363,248 gallons  
DESIGN STORAGE VOLUME: 294,313 gallons  
COVERED: No





## WASTE STORAGE FACILITY SIZING

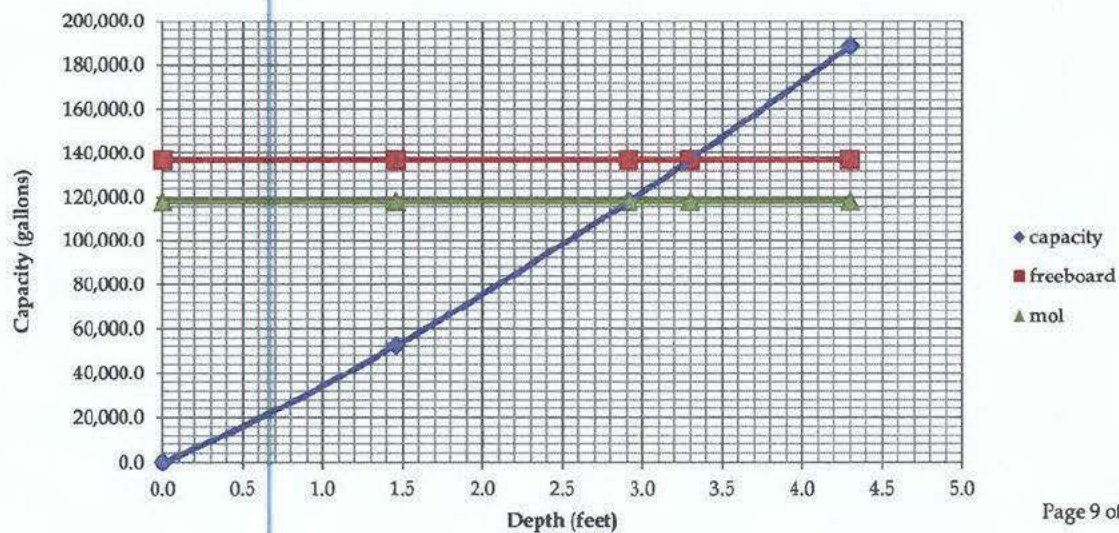
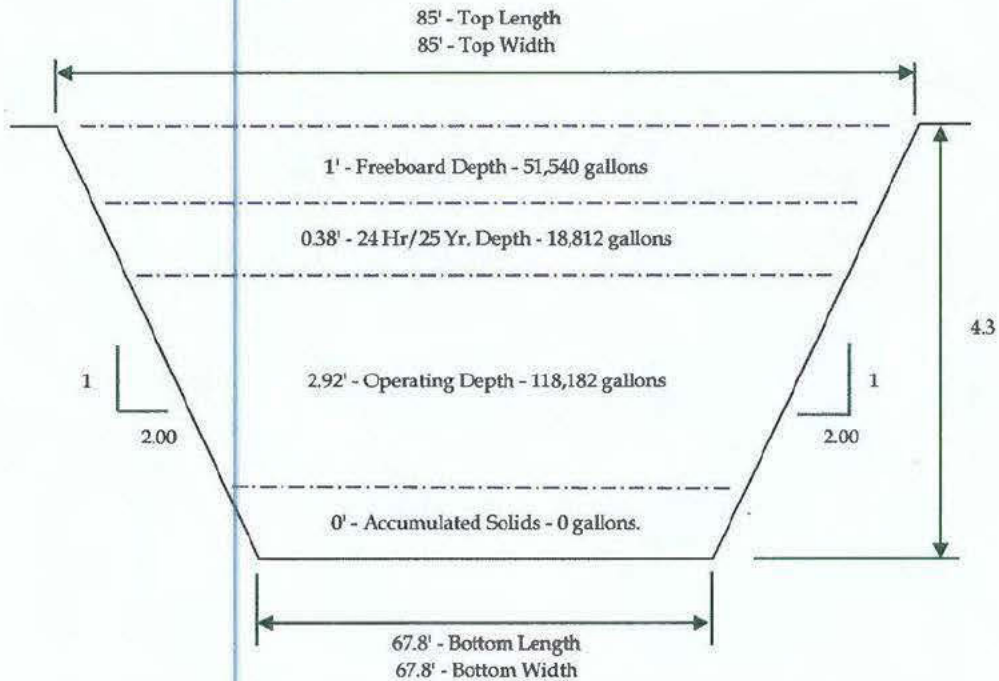
Project Name: **FOIA Ex. 6 (Personal)** (S FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

### EXISTING STORAGE: WSP #1

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 188,533 gallons  
DESIGN STORAGE VOLUME: 136,993 gallons  
COVERED: No







## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal)** (S FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

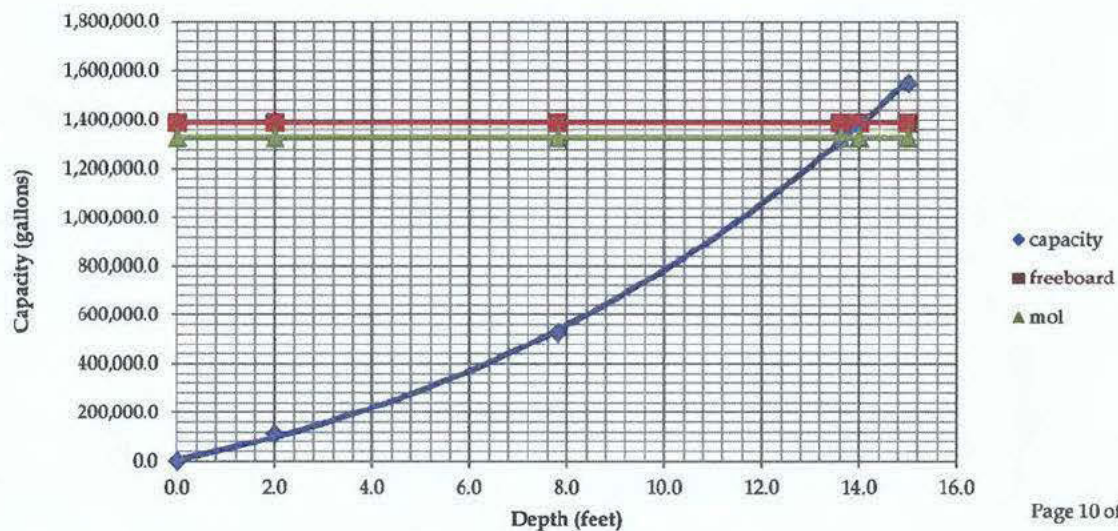
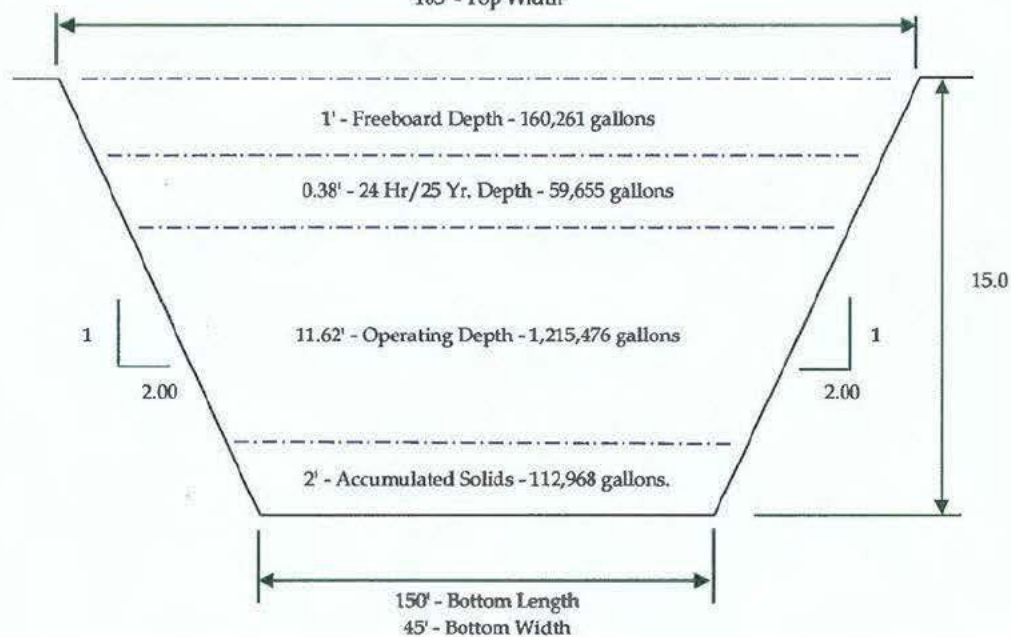
Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: WSP #2

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 1,548,360 gallons  
DESIGN STORAGE VOLUME: 1,275,131 gallons  
COVERED: No

210' - Top Length  
105' - Top Width





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal)** (54 FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

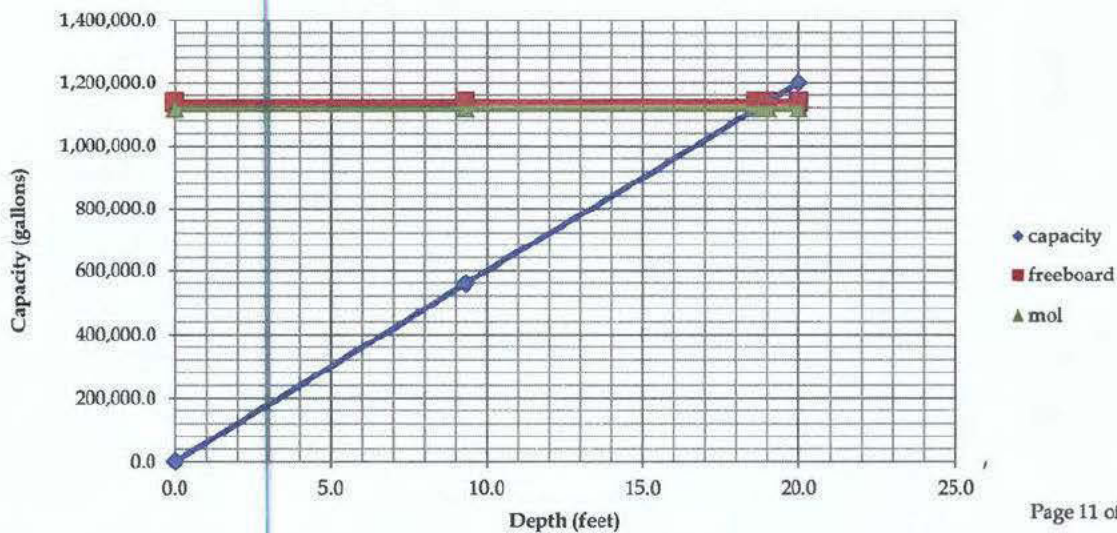
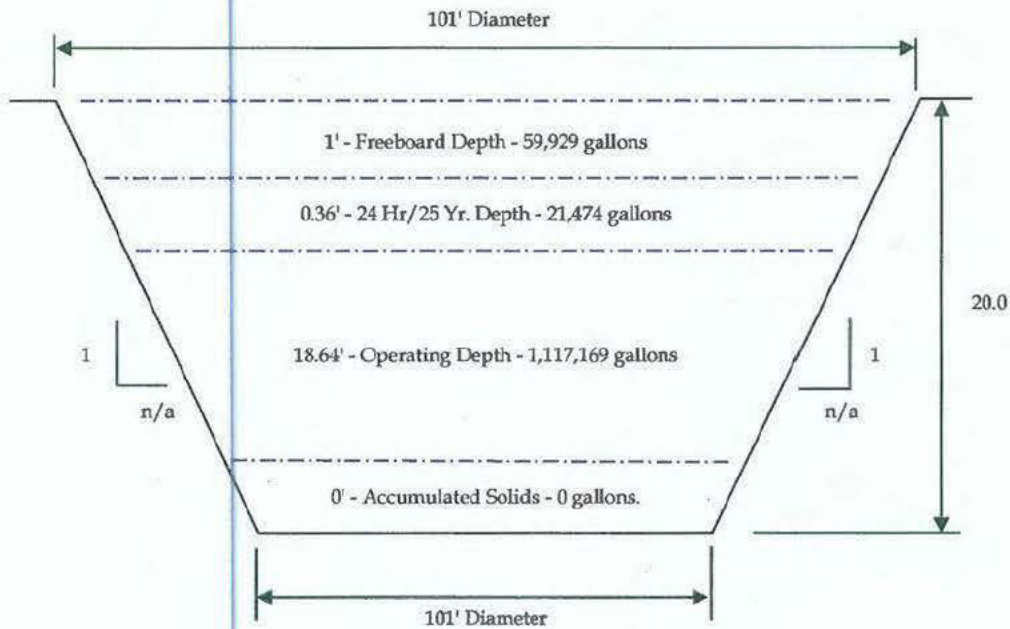
EXISTING STORAGE: Slurrystore

STORAGE TYPE: Circular Tank

TOTAL CAPACITY: 1,198,572 gallons

DESIGN STORAGE VOLUME: 1,138,644 gallons

COVERED: No







## WASTE STORAGE FACILITY SIZING

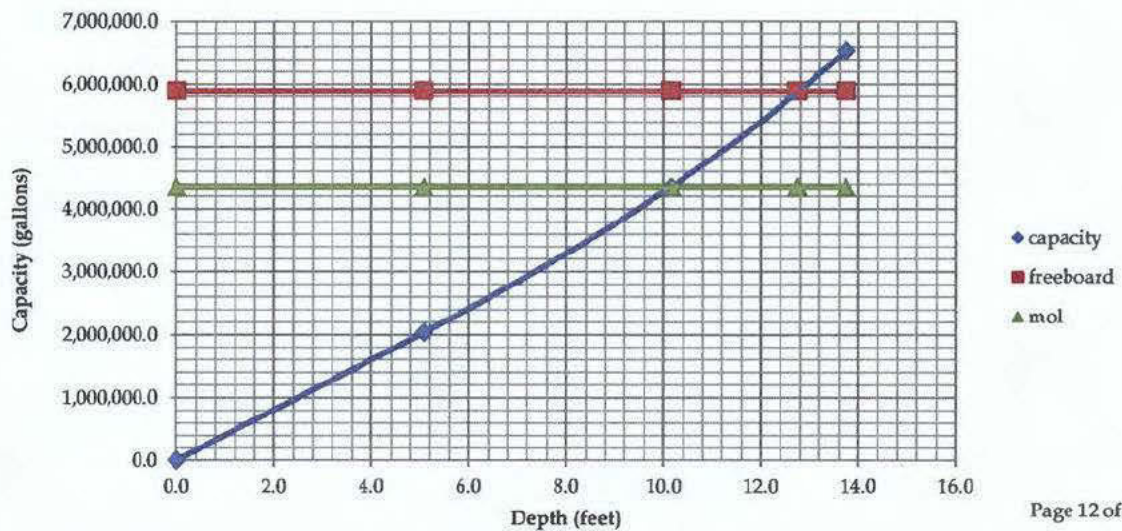
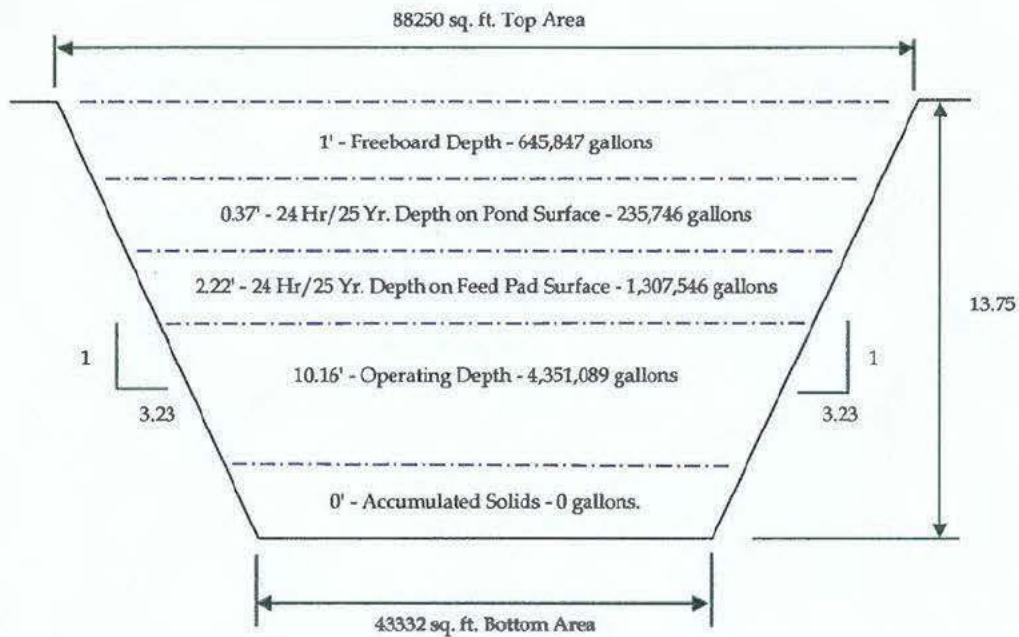
Project Name: **FOIA Ex.** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 19, 2018  
Checked By: \_\_\_\_\_

PROPOSED STORAGE: Proposed Leachate Pond

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 6,541,089 gallons  
DESIGN STORAGE VOLUME: 5,895,242 gallons  
COVERED: No





## about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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Maija Seppanen  
Maija.seppanen@ghd.com  
920.490.2889

[www.ghd.com](http://www.ghd.com)



ATTACHMENT 5: GHD, SITE VISIT FOLLOW-UP, OCTOBER 12, 2018



October 12, 2018

Reference No. 053142

Mr. Don Schwer, II  
Agricultural Engineer  
Water Division, WECA  
U.S. EPA Region 5  
77 W. Jackson Blvd. (WC-15J)  
Chicago, Illinois 60604

Via Email: schwer.don@epa.gov

Dear Mr. Schwer:

Re: **USEPA Site Visit Follow-Up**  
**FOIA Ex. 6 Enterprises, LLC**

On behalf of **FOIA Ex. 6 Enterprises, LLC (Farm)**, GHD Services Inc. (GHD), has prepared this response to question posed by the United States Environmental Protection Agency (USEPA) following a recent visit to the Farm located at **FOIA Ex. 6 (Personal Privacy)**, Algoma, Kewaunee County, Wisconsin. Questions from EPA staff were received by the Farm and GHD via email on September 25, 2018. Each comment along with a response is below:

*Comment 1*

**Information on the pump model # and/or pump curve for the pump in the collection basin (VTA) for the feed storage area.**

*Response*

The pump utilized in the leachate collection systems is a Goulds Model 3888D4 Pump Series WS50D4 with a 5.0 horsepower motor and a capacity of 386 gallons per minute. A copy of the pump specifications including the pump curve is included in Attachment A.

*Comment 2*

**The engineering evaluation for Waste Storage Facility (WSF) 1 at the Longfellow site. I was able to get the engineering evaluation of WSF 2 from the WDNR (Roach & Associates dated March 6, 2013). Note: I am not requesting an evaluation of WSF 1 to be done only a copy of an evaluation if it has been conducted.**

*Response*

**FOIA Ex. 6 Enterprises** will complete an engineering evaluation of WSF #1 at the Longfellow Farm during the next WPDES permit term as noted in the letter received on March 19, 2018 from Ms. Andrea Gruen, WDNR Agricultural Runoff Specialist. A copy of the WDNR correspondence is included in Attachment B.





*Comment 3*

The calculations regarding the 25 year/24 hr. storm event runoff from areas that contribute runoff to the WSFs at the Main Site, Longfellow, and K Farm. The calculations for the determination of the maximum operating levels for WSFs at Main Site, Longfellow, and K Farm.

*Response*

Calculations for the 25 year/24 hour storm event runoff for contributing areas and direct precipitation on the waste storage structures surfaces at the Main, Longfellow and K Farm Sites are included in Table 1. The 25 year/24 hour storm event in for Kewaunee County, Wisconsin is 4.3 inches. Diagrams of the WSFs that identify the freeboard and storm event contributions are included for your review in Attachment C.

I trust that you will find this information in order. Should you have any questions or require additional information, please contact us at 920-490-1663.

Sincerely,

GHD

Ex. 6 (Personal Privacy) M.S.

JK/md/1

Encl.

cc: Ex. 6 (Personal Privacy) Ebert Enterprises, LLC  
Ex. 6 (Personal Privacy) Ebert Enterprises, LLC

Ex. 6 (Personal Privacy) P.E.

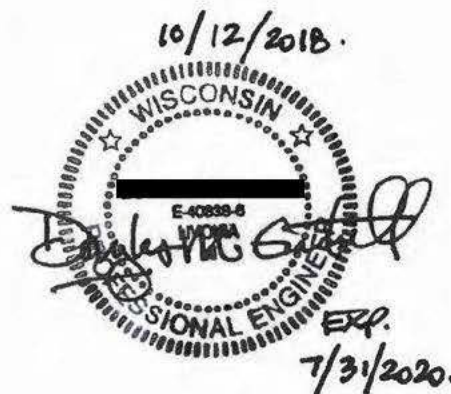


Table 1

**25 Year/24 Hour Storm Calculations**  
**FOIA Enterprises, LLC**  
**Algoma, Kewaunee County, Wisconsin**

**25 yr storm volume on WSP surfaces and contributing areas**

	Top Area	Precip	Volume	Volume	
	ft <sup>2</sup>	in	ft <sup>3</sup>	gal	
<b>Main Farm</b>					
WSP #1	26,581	4.3	9,525	71,246	
WSP #2	78,663	4.3	28,188	210,843	
WSP #3	111,450	4.3	39,936	298,723	
Existing and Proposed Feed Pad-Main	356,542	4.3	127,761	955,651	To Leachate Pond
Proposed Leachate Pond-Main	88,250	4.3	31,623	236,539	
Old Feed Pad-Main	165,964	0	0	0	Leachate and Runoff to WSP#2
<b>K Farm</b>					
Runoff Pond- K Farm	27,730	4.3	9,937	74,326	To Runoff Pond
K-Farm Outdoor Lots	74,738	4.3	26,781	200,323	
K-Farm Perimeter Drainage Area	16,647	4.3	5,965	44,620	
<b>Longfellow Farm</b>					
Longfellow WSP #1	73,984	4.3	26,511	198,302	
Longfellow WSP #2	64,925	4.3	23,265	174,021	
Ex Leachate Detention Basin (Longfellow)	9,700	4.3	3,476	25,999	**To Leachate Detention Basin
Longfellow - Feed Pad, apron + expansion	125,391	4.3	44,932	336,090	
Longfellow - Animal Lot (Y2)	4,117	4.3	1,475	11,035	

## Notes:

\*\* Approximately 108,460 gallons is collected during the 25 yr/24 hr design storm that is beyond the usable capacity of the leachate basin.



# **Attachment A**

## **Goulds Pump B3888D4 Pump Specs**

## TECHNICAL BROCHURE

B3888D4 R2



### FEATURES

Impeller: Cast iron, two vane semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

Casing: Heavy duty gray cast iron, ASTM A48, Class 30. Volute type casing with 4", 125#, ANSI flanged, horizontal discharge. Compatible with A10-40 cast iron or A10-40B cast iron and brass (non-sparking) guide rail assembly.

Dual Mechanical Seals: Silicon carbide vs. silicon carbide outer seal and ceramic vs. carbon inner seal, stainless steel metal parts, BUNA-N elastomers. Upper and lower shaft seals are positioned independently and are separated by an oil-filled chamber.

Shaft: 300 series stainless steel keyed design.

Fasteners: 300 series stainless steel.

Capable of running dry temporarily without damage to seals or motor.

# WS\_D4 Series Model 3888D4

SUBMERSIBLE SEWAGE PUMPS

 **GOULDS**  
WATER TECHNOLOGY  
a **xylem** brand



## Wastewater

### APPLICATIONS

Used in a variety of residential, commercial and industrial applications such as:

- Sewage systems, Flood and Pollution Control, Dewatering/Effluent, Farms, Hospitals, Trailer Courts, Motels

### SPECIFICATIONS

#### Pump:

- Maximum solid size: 3"
- Discharge size: 4", 125 # ANSI flange
- Maximum capacity: 620 GPM
- Maximum total head: 60 feet
- 300 Series stainless steel fasteners
- 20' Power cord
- Standard silicon carbide/silicon carbide outer seal

#### Motor:

- Maximum ambient temperature: 104° F (40° C) continuous duty, 140° F (60° C) intermittent duty
- Rated for continuous duty when fully submerged
- Insulation: Class F
- 60 Hertz
- Single row ball bearings
- 300 Series stainless steel keyed shaft

#### Single Phase:

- 1.5 - 5 HP; 208 and 230 volts
- Built-in thermal overloads with automatic reset
- Built-in capacitors

#### Three Phase:

- 1.5 - 7.5 HP; 200, 230, 460 and 575 volts
- Class 10 overload protection must be provided in control panel

### MOTORS

- Fully submerged in oil-filled chamber: High grade turbine oil surrounds motor for more efficient heat dissipation, permanent lubrication of bearings and mechanical seal for complete protection against outside environment.
- Class F insulation
- Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits and can be operated continuously without damage when fully submerged.
- Bearings: Upper and lower heavy duty ball bearing construction for precision positioning of parts and to carry thrust loads.
- Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. 20 foot standard with optional lengths available.
- O-ring: Assures positive sealing against contaminants and oil leakage.

### AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards  
By Canadian Standards Association  
File #LR38549

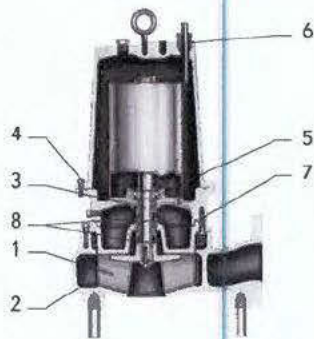
### MODEL AND MOTOR INFORMATION

Order Number	HP	Phase	Volts	RPM	Impeller Dia. (in.)	Maximum Amps	L.R. Amps	KVA Code	Power Cable	F.L. Motor Efficiency %	Resistance		Wt. (lbs.)
											Start	Line-Line	
WS1518D4M	1.5	1	208	1750	5.63	17.2	50.8	B	14/3	80	1.1	0.9	195
WS1512D4M			230			14.7	29.5	E		70	1.4	1.8	
WS1538D4M			200			11.5	40.9	H		81		1.7	
WS1532D4M		3	230			10.0	40.0	F	14/4	83	NA	2.3	
WS1534D4M			460			5.0	20.0	F		83		9.3	
WS1537D4M			575			4.0	14.4	H		74		14.8	
WS1518D4		1	208		6.25	17.2	50.8	B	14/3	80	1.1	0.9	195
WS1512D4			230			14.7	29.5	E		70	1.4	1.8	
WS1538D4			200			11.5	40.9	H		81		1.7	
WS1532D4		3	230			10.0	40.0	F	14/4	83	NA	2.3	
WS1534D4			460			5.0	20.0	F		83		9.3	
WS1537D4			575			4.0	14.4	H		74		14.8	
WS2018D4	2	1	208		6.63	20.3	50.8	B	14/3	80	1.1	0.9	200
WS2012D4			230			17.3	36.9	D		75	1.4	1.5	
WS2038D4			200			13.3	40.9	H		81		1.7	
WS2032D4		3	230			11.6	40.0	F	14/4	83	NA	2.3	
WS2034D4			460			5.8	20.0	F		83		9.3	
WS2037D4			575			4.6	14.4	H		74		14.8	
WS3018D4		3	208		7.00	25.5	50.8	B	10/3	80	1.1	0.9	208
WS3012D4			230			21.5	46.4	C		79	1.0	1.0	
WS3038D4			200			16.6	53.8	G	10/4	85		1.3	
WS3032D4		3	230			14.4	49.5	H		83	NA	1.9	205
WS3034D4			460			7.2	24.8	H		83		7.5	
WS3037D4			575			5.8	17.3	G		78		11.6	
WS5012D4	5	1	230		7.25	26.5	57.7	A	10/3	80	1.0	0.8	213
WS5038D4			200			19.1	73.9	F		84		0.9	
WS5032D4		3	230			16.6	63.6	E	10/4	85	NA	1.2	210
WS5034D4			460			8.3	31.8	E		85		4.8	
WS5037D4			575			6.6	22.8	E		80		7.4	
WS7532D4		7.5	230		7.69	23.0	105.0	G	10/4	83	NA	0.7	225
WS7534D4			460			11.5	52.5	G		83		2.8	
WS7537D4			575			9.2	42.0	E		84		4.4	



## Wastewater

### MATERIALS OF CONSTRUCTION

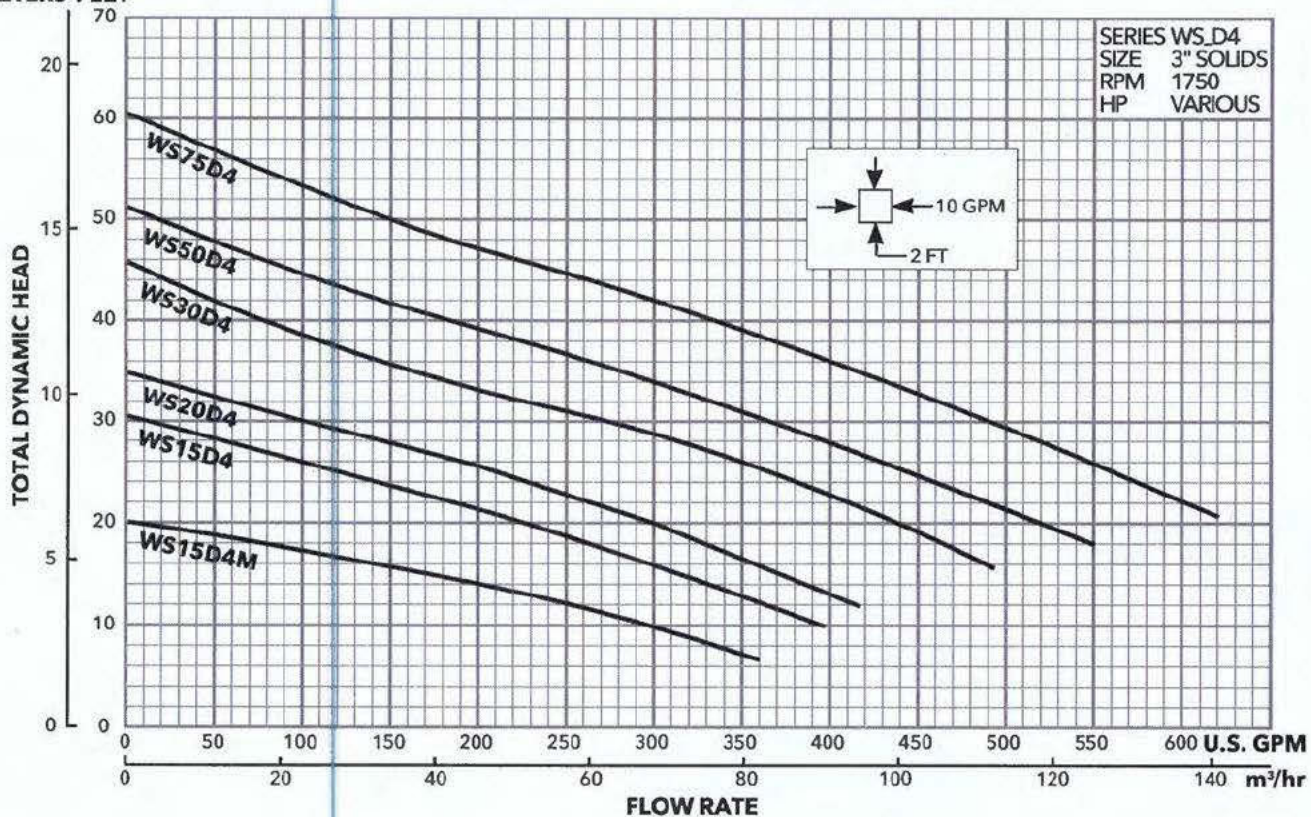


Item No.	Part Name	Material				
		Standard		Optional		
1	Impeller, non-clog	1003		1179		
2	Casing	1003				
3	Shaft-keyed	300 Series SS				
4	Fasteners	300 Series SS				
5	Ball bearings	Steel				
6	Power cable	STOW, 20 feet		Additional lengths		
7	O-ring	BUNA-N				
8	Outer Mech. Seal	Service	Rotary	Stationary	Elastomers	Metal Parts
	OPT	Heavy duty	Silicon Carbide	Tungsten Carbide	BUNA-N	300 Series SS
	STD	Mild abrasives	Silicon carbide		BUNA-N	300 Series SS
Material Code		Engineering Standard				
1003		Cast iron – ASTM A48 Class 30				
1179		Silicon bronze – ASTM C87600				

### PERFORMANCE RATINGS (gallons per minute)

Series No. ▶	WS15D4M	WS15D4	WS20D4	WS30D4	WS50D4	WS75D4	
HP ▶	1½	1½	2	3	5	7½	
RPM ▶	1750						
Total Head Feet of Water	10	300	395				
	15	170	320	370			
	20		230	300	440	520	
	25		120	205	365	440	
	30			100	270	360	510
	35				160	275	440
	40				80	175	355
	45					85	260
	50						155
	55						80

METERS FEET



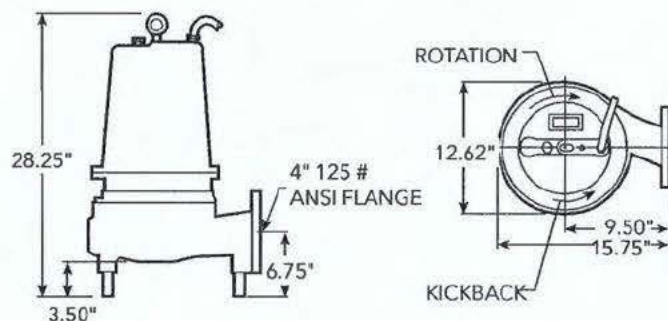


## APPLICATION DATA AND CONSTRUCTION DETAILS

Maximum Solid Size	3"
Minimum Casing Thickness	$\frac{5}{16}$ "
Casing Corrosion Allowance	$\frac{1}{8}$ "
Maximum Working Pressure	30 PSI
Maximum Submergence	50 feet
Minimum Submergence	Fully submerged for continuous operation 6" below top of motor for intermittent operation
Maximum Environmental Temperature	40° C (104° F) continuous operation, 60° C (140° F) intermittent operation
Power Cable - Type (See Motor Information for AWG data/size.)	Type SJTOW: single phase, 1½ and 2 HP Type STOW: single phase, 1½ - 3 HP and 5 HP, 460 V Type STOW: single phase, 3 and 5 HP, three phase 5 HP, 230 V and 7½ HP
Motor Cover, Bearing Housing, Seal Housing, Casing	Gray Cast Iron - ASTM A48, Class 30
Impeller - Standard, Optional	Gray Cast Iron - ASTM A48 or Cast Bronze - ASTM B584 C87600
Motor Shaft	AISI 300 Series Stainless Steel
Motor Design	NEMA 56 Frame, oil filled with Class F Insulation
Motor Overload Protection	Single phase: on winding thermal overload protection auto reset Three phase: requires Class 10 overloads in control panel
External Hardware	300 Series Stainless Steel
Impeller Type	Semi-open with pump out vanes on back shroud
Oil Capacity - Seal Chamber	1.5 quarts
Oil Capacity - Motor Chamber	1½-5 HP single and three phase: 7 quarts 7½ HP three phase: 6.5 quarts
Mechanical Seals - Standard	Upper Carbon/Ceramic; Type 21 Lower Silicon Carbide/Silicon Carbide; Type 31
Mechanical Seals - Optional Lower	Silicon Carbide/Tungsten Carbide; Type 31

## DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



**xylem**  
Let's Solve Water

Xylem Inc.  
2881 East Bayard Street Ext., Suite A  
Seneca Falls, NY 13148  
Phone: (866) 325-4210  
Fax: (888) 322-5877  
[www.gouldswatertechnology.com](http://www.gouldswatertechnology.com)

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## **Attachment B**

### **WDNR Correspondence**



State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
Northeast Region Headquarters  
2984 Shawano Avenue  
Green Bay WI 54313-6727

Scott Walker, Governor  
Daniel L. Meyer, Secretary  
Telephone 920-662-5100  
FAX 920-662-5413  
TTY Access via relay - 711



March 19, 2018

Ex. 6 (Personal Privacy)

Ebert Dairy Enterprises, LLC

FOIA Ex. 6 (Personal Privacy)

Algoma, WI 54201

WPDES Permit #: WI-0062235-03-1  
Kewaunee County

**Subject: Permit Reissue Inspection & Application Status Summary**

Dear

Ex. 6 (Personal Privacy)

On February 22, 2018, The Department of Natural Resources (Department) conducted a site inspection for FOIA Ex. 6 Dairy Enterprises, LLC, located at FOIA Ex. 6 (Personal Privacy), Algoma, WI (Main Farm); FOIA Ex. 6 (Personal Privacy) Algoma, WI (Beef Farm); FOIA Ex. 6 (Personal Privacy) Algoma, WI (Longfellow Farm); and FOIA Ex. 6 (Personal Privacy) Algoma, WI (LaLuzerne Farm). The site inspection was conducted as part of the permit reissuance process. Present at the inspection were Ex. 6 (Personal Privacy) Farm Owner, Ex. 6 (Personal Privacy) Farm Manager; FOIA Ex. 6 (Personal Privacy) WDNR Runoff Management Specialist; and Andrea Gruen, Agricultural Runoff Management Specialist. A site inspection report, including photographs of the site with an accompanying narrative, is enclosed for your review and convenience.

As a reminder, the complete permit application for your farm is due on July 1, 2018. The following items must be included for the application to be considered complete:

- Information on changes to the operation that have occurred during the current permit term and changes that are anticipated during the upcoming permit term, including changes that are necessary to comply with Chapter NR 243, Wis. Adm. Code;
- The location of the existing site and proposed modifications to the site on maps such as aerial photographs or soil survey maps;
- Documentation of 180 days of manure and process wastewater storage;
- An updated nutrient management plan reflecting changes that have occurred at the operation since the previous permit issuance and that incorporates the requirements in Chapter NR 243, Wisconsin Administrative Code;
- Completed copies of Forms 3400-25 (Livestock/Poultry Operation WPDES Permit Application) and 3400-25A (Animal Units Calculation Worksheet) for each site to be covered under the permit. These forms can be found online at:  
<http://dnr.wi.gov/topic/AgBusiness/CAFO/PermitForms.html>

- Install permanent markers (margin of safety and maximum operating level) in all liquid manure and process wastewater storage facilities and provide placement calculations and photo documentation of installation.
- Install fencing around liquid manure and process wastewater storage facilities in accordance with NRCS Standard 313 and provide photo documentation of installation.

The following item has been identified for inclusion in a compliance schedule in the reissued permit.

- WSF Evaluation: An engineering evaluation of WSF 1 at the Longfellow Farm will be required during the upcoming permit term in accordance with s. NR 243.16(2) Wis. Adm. Code based upon factors including the age of the facility.

If you have any questions regarding this letter or site inspection report, please contact me at (920) 662-5460 or [Andrea.Gruen@Wisconsin.gov](mailto:Andrea.Gruen@Wisconsin.gov).

Sincerely,



Andrea Gruen  
Agricultural Runoff Management Specialist

Enclosure: Site Inspection Report

E-Copy to: Rick Stoll, Jeff Kreider, Aaron O'Rourke, Clare Freix – WDNR  
Nick Guilette – AgSource Laboratories  
Jen Keuning – GHD  
Davina Borress – Kewaunee County Land & Water Conservation Department



## **Attachment C**

### **WSF Diagrams**



## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal)** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 19, 2018  
Checked By: \_\_\_\_\_

### WEATHER DATA

Site Location: Algoma, Kewaunee County, WI

Weather Station Location: Kewaunee - KEWAUNEE WI4195

25 Year / 24 Hour Storm: 4.3 inches

	Precipitation	Evaporation	Precip. - Evap.
	(in)	(in)	(in)
January	1.09	0.02	1.07
February	1.02	0.02	1.00
March	1.79	0.07	1.72
April	2.93	0.63	2.30
May	3.53	1.69	1.84
June	4.21	2.48	1.73
July	4.02	2.76	1.26
August	4.01	2.36	1.65
September	3.73	1.57	2.16
October	2.82	0.67	2.15
November	2.16	0.08	2.08
December	1.40	0.02	1.38
Total (in)	32.71	12.37	20.34





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

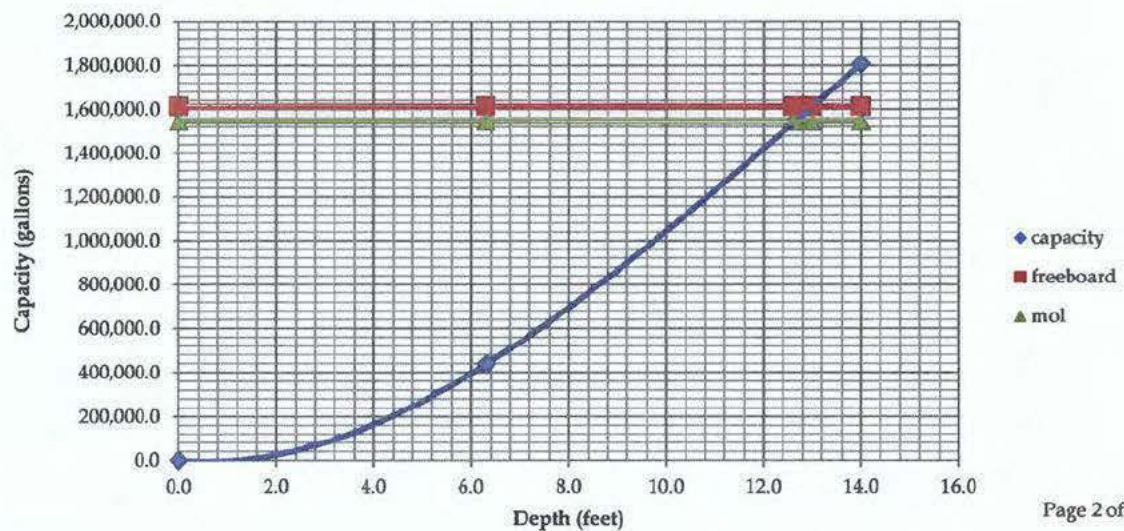
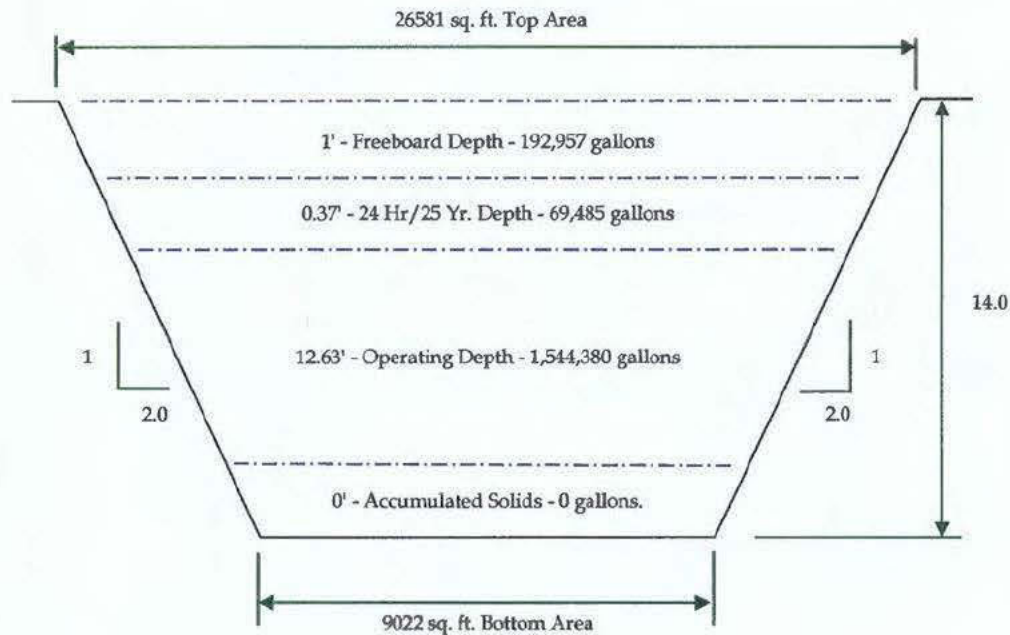
### EXISTING STORAGE: WSP #1

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 1,806,821 gallons

DESIGN STORAGE VOLUME: 1,613,865 gallons

COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

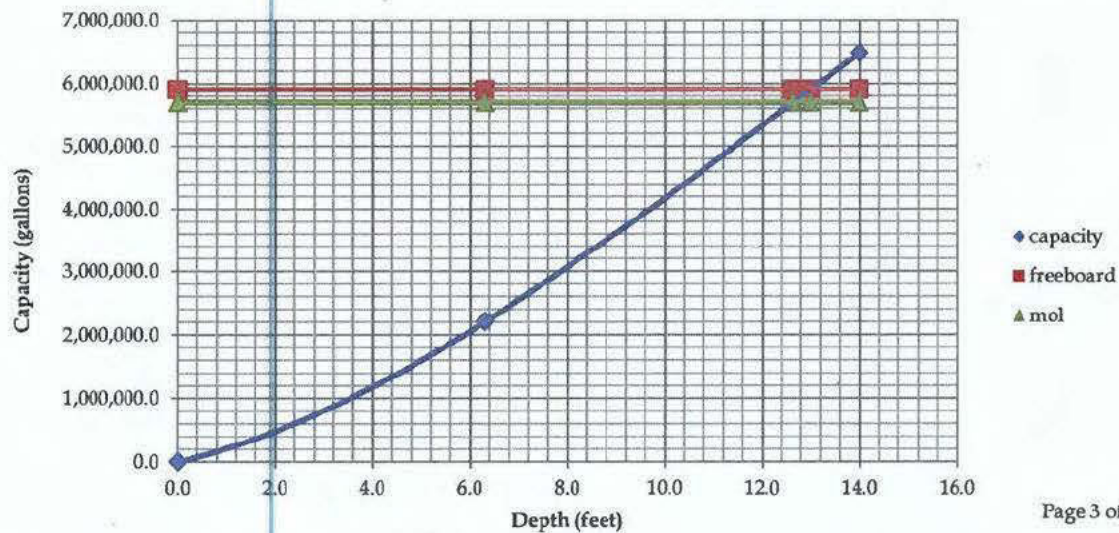
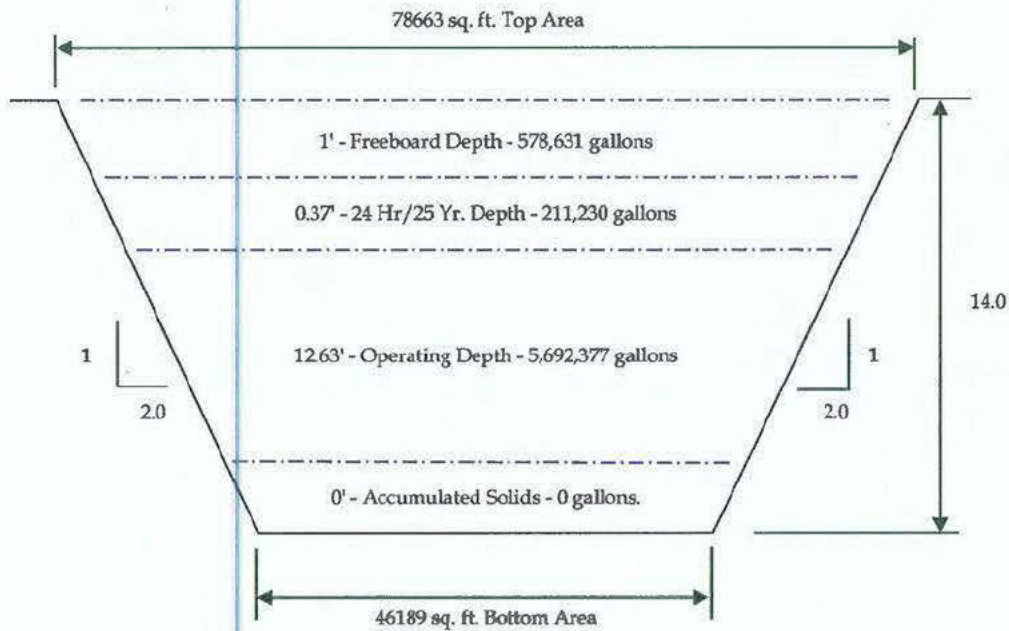
EXISTING STORAGE: WSP #2

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 6,482,238 gallons

DESIGN STORAGE VOLUME: 5,903,607 gallons

COVERED: No







## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA EX. 6** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

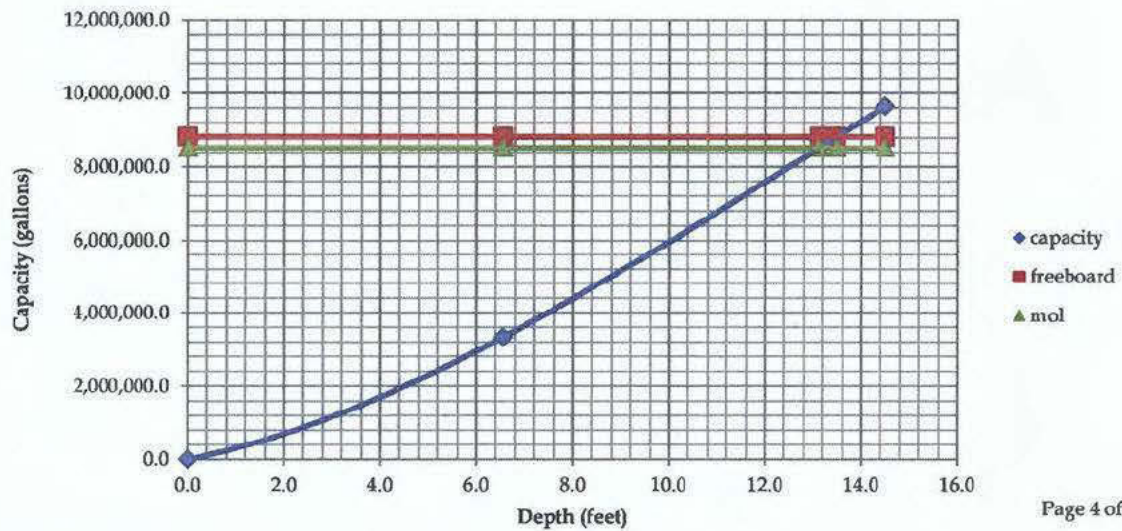
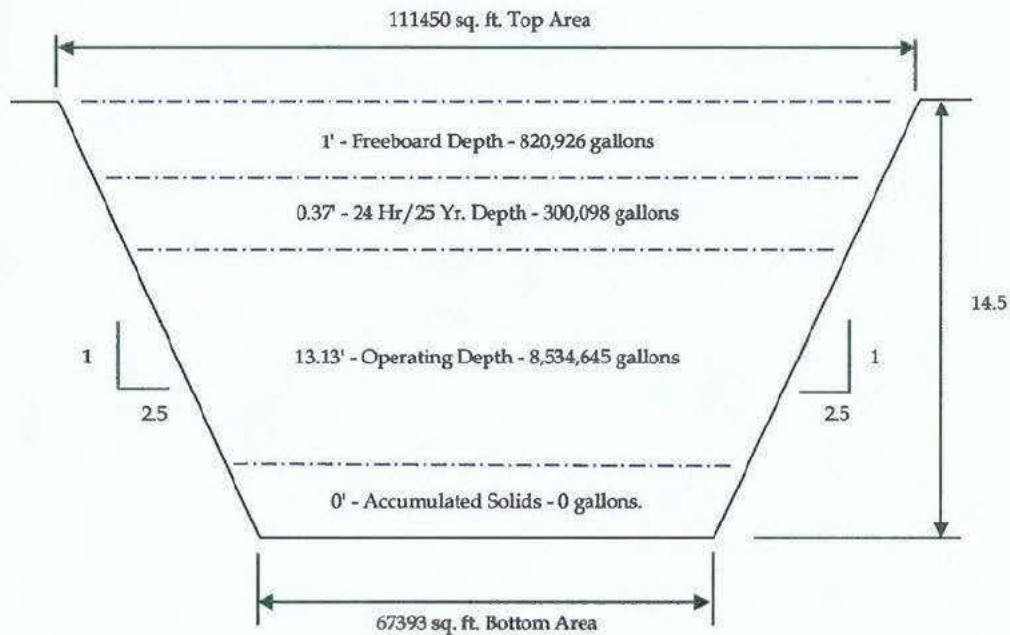
EXISTING STORAGE: WSP #3

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 9,655,670 gallons

DESIGN STORAGE VOLUME: 8,834,743 gallons

COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex.** (MAIN FACILITY)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 19, 2018  
Checked By: \_\_\_\_\_

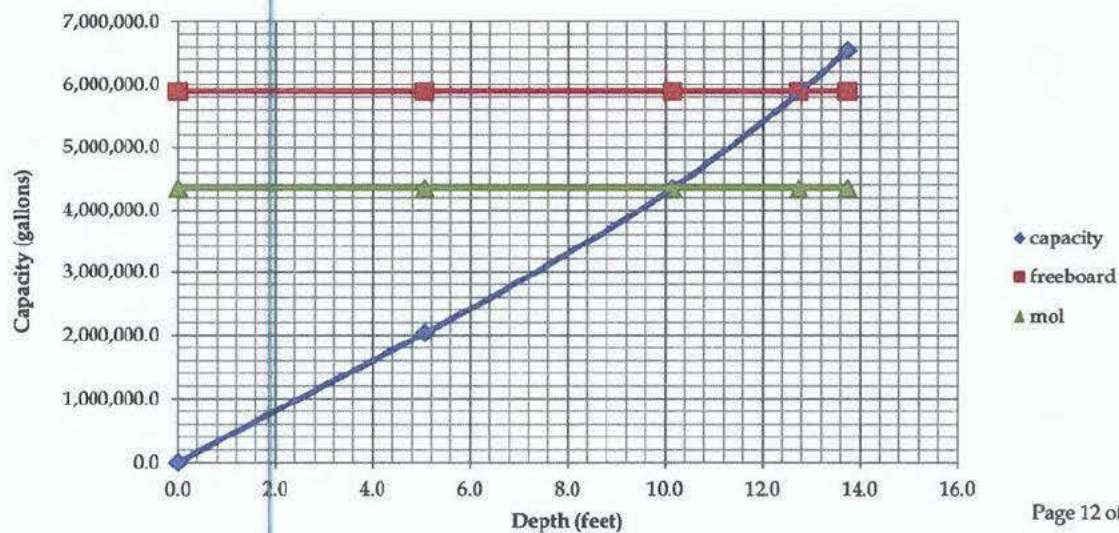
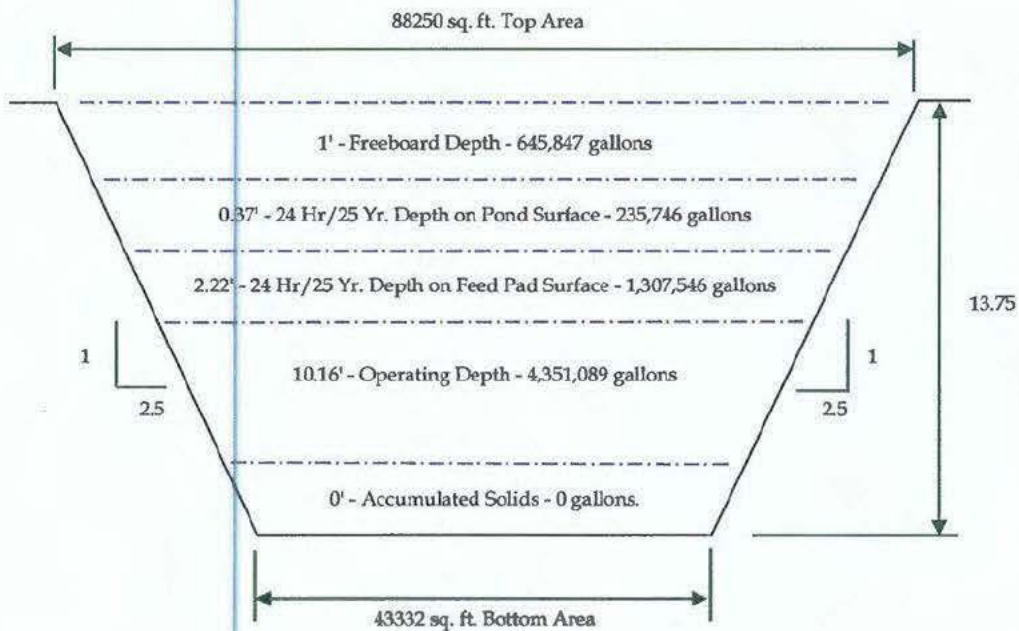
PROPOSED STORAGE: Proposed Leachate Pond

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 6,541,089 gallons

DESIGN STORAGE VOLUME: 5,895,242 gallons

COVERED: No







## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (K FARM)**  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: July 25, 2018  
Checked By: \_\_\_\_\_

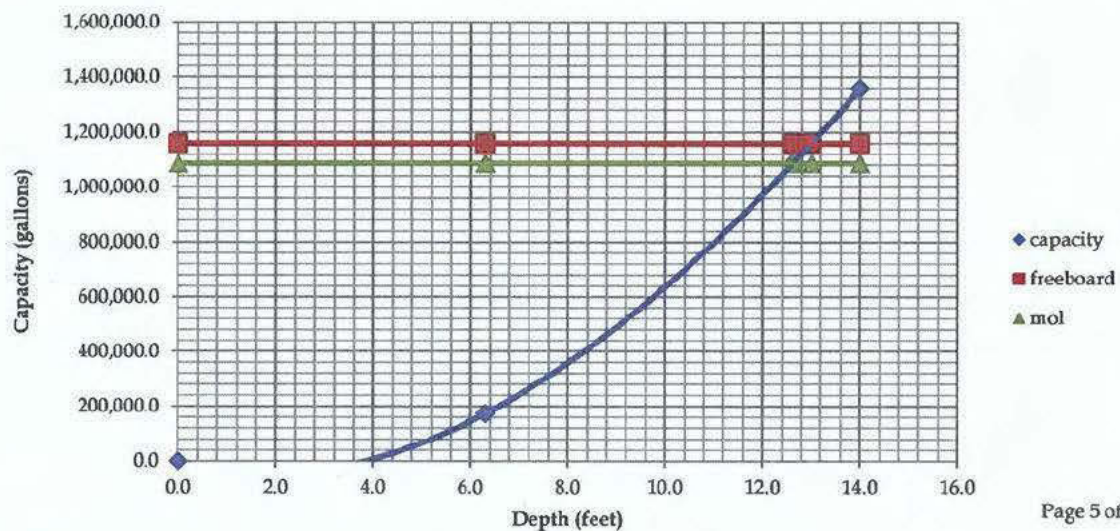
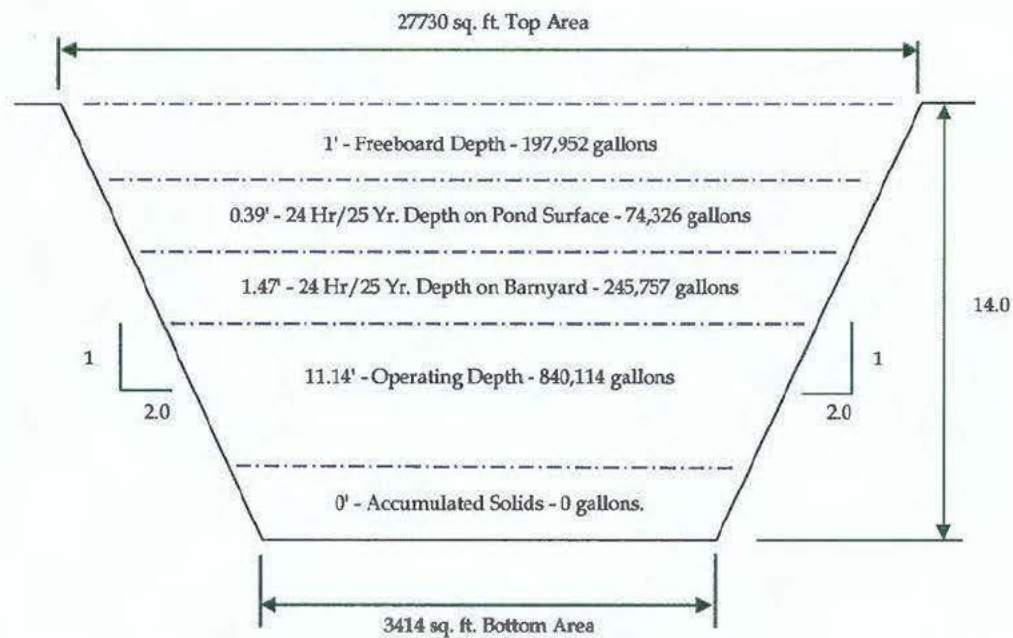
EXISTING STORAGE: Runoff Pond

STORAGE TYPE: Irregular Shaped Pond

TOTAL CAPACITY: 1,358,149 gallons

DESIGN STORAGE VOLUME: 1,160,197 gallons

COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA Ex. 6 (Personal Privacy)** (LONGFELLOW)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

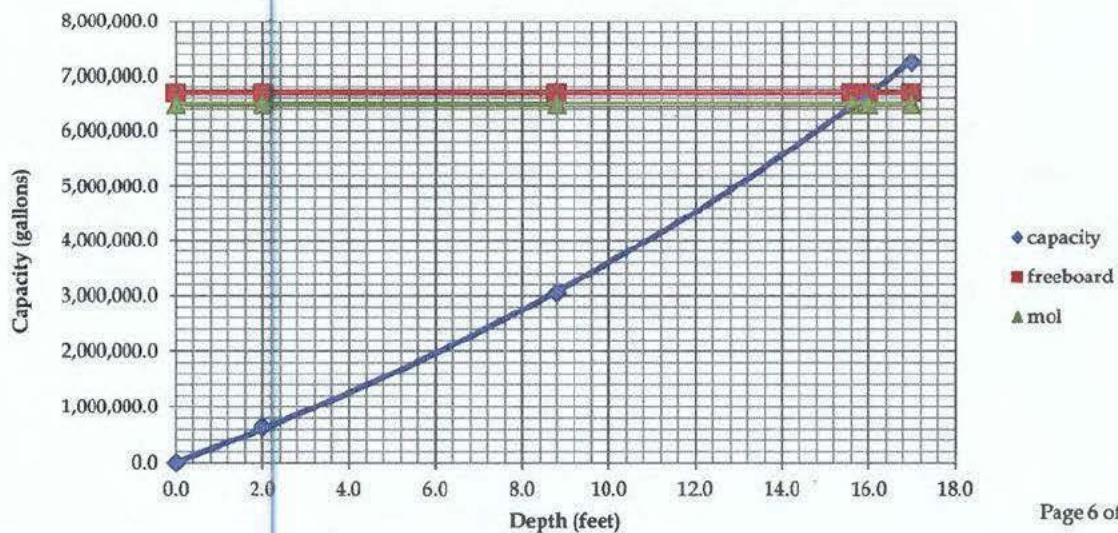
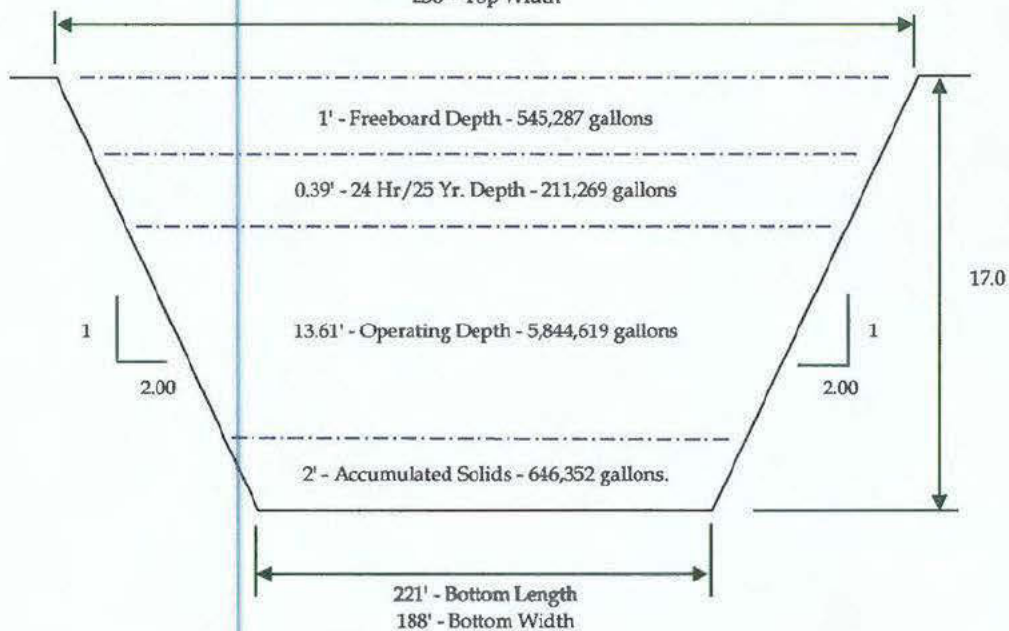
Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: WSP #1

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 7,247,527 gallons  
DESIGN STORAGE VOLUME: 6,055,888 gallons  
COVERED: No

289' - Top Length  
256' - Top Width







## WASTE STORAGE FACILITY SIZING

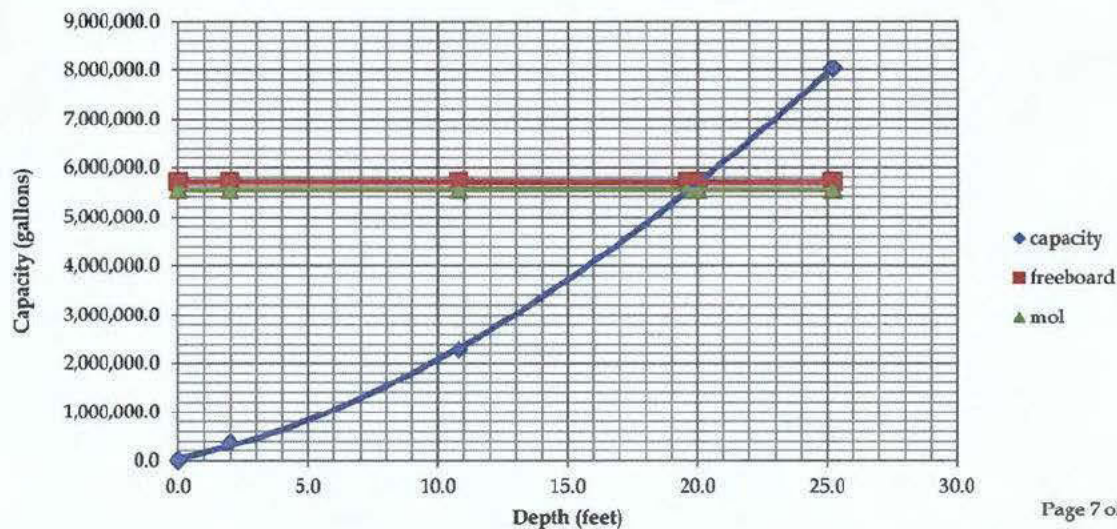
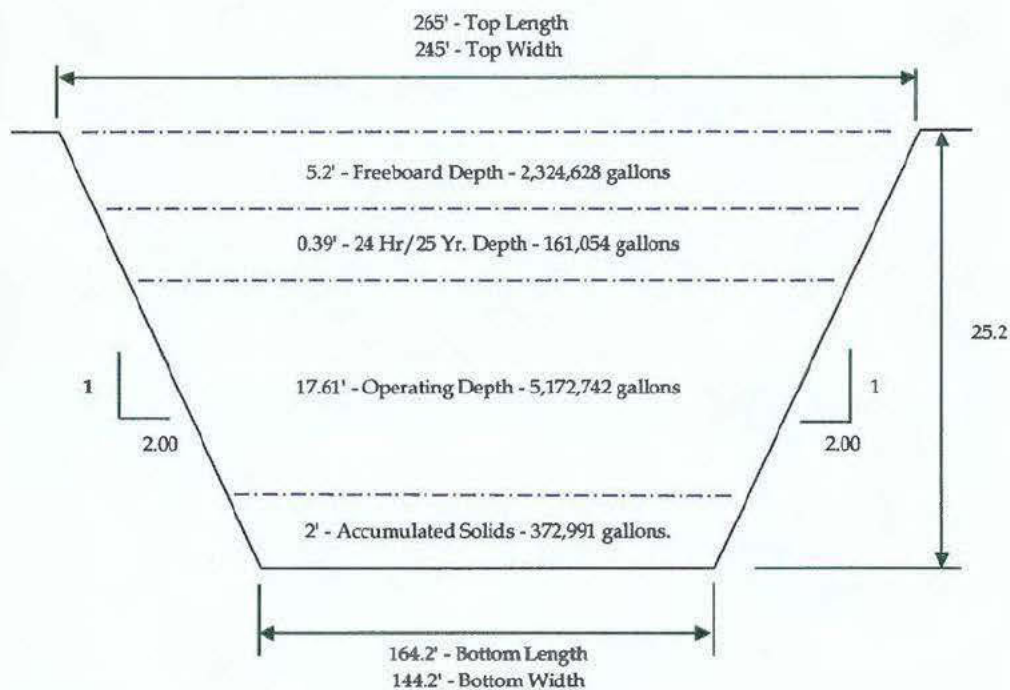
Project Name: **FOIA EX.** (LONGFELLOW)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: WSP #2

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 8,031,415 gallons  
DESIGN STORAGE VOLUME: 5,333,796 gallons  
COVERED: No





## WASTE STORAGE FACILITY SIZING

Project Name: **FOIA** (LONGFELLOW FARM)  
Project Number: 53142(37)  
County/State: Kewaunee, WI

Designed By: **Ex. 6 (Personal Privacy)**  
Date: June 25, 2018  
Checked By: \_\_\_\_\_

EXISTING STORAGE: Leachate Basin

STORAGE TYPE: Rectangular Pond

TOTAL CAPACITY: 363,248 gallons

DESIGN STORAGE VOLUME: 294,313 gallons

COVERED: No

97' - Top Length

100' - Top Width

